Nama : Adelia Putri Widyasari

NIM : A11.2022.14426

Kelas : A11.43UG1

**KUIS DATA ENCRYPTION STANDARD (DES)**

Plaintext : FOTO SELFIE ANDA SAAT INI

Key : 02214426

Github : <https://github.com/adeliaputriw/Kriptografi-DES-43UG1-A11.2022.14426.git>

q

1. Bagaimana hasil binerisasi image selfie anda sebagai plaintext?

0000000000000000111111000000000000000000

0000000000000001110011110000000000000000

0000000000000001000001110000000000000000

0000000000000001000000111000000000000000

0000000000000000011110011000000000000000

0000000000000000111110011000000000000000

0000000000000000001111001000000000000000

0000000000000000001110001000000000000000

0000000000000001111111111000000000000000

0000000000000001111111111000000000000000

0000000000000000111111111000000000000000

0000000000000000000011111000000000000000

0000000000000000100111111000000000000000

0000000000000000000111011001110000000000

0000000000011100000110011111110000000000

0000000000011110001101111111111000000000

0000000001111111110111111111111100000000

0000000001111111111111111111111111111000

0000000001111111111111011111111111111111

0000000001111111111111111011111111111111

0000000001111111111111111111111111111111

0000000001111111111111111111111111111111

0000000001111111111111111111111111111111

1. Bagaimana proses dan hasil enkripsi pada setiap fase?

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313030

After Initial Permutation: 00FF003F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110001110 01101000111011101000111001001000 010100001010110010100100010101001010000101000001

Round: 3 01101000111011101000111001001000 10011010010011111011010010101110 110100001010110000100110011000101010010001001100

Round: 4 10011010010011111011010010101110 00010000010000001101011010010110 111000001010011000100110011010001011010110001010

Round: 5 00010000010000001101011010010110 11110100101010111110001010101111 111000001001011000100110001011000101010000101011

Round: 6 11110100101010111110001010101111 00100001010101101111001010110000 111000001001001001110010010011100101100001100010

Round: 7 00100001010101101111001010110000 00000110101100111100101101011001 101001001101001001110010100001001100100101111000

Round: 8 00000110101100111100101101011001 11001101110011000100100100111101 101001100101001101010010100000011001111001010000

Round: 9 11001101110011000100100100111101 11010110010011110011010100000110 001001100101001101010011110010010001001001011000

Round: 10 11010110010011110011010100000110 00001000001110110110101000100000 001011110101000101010001100100011101001000101100

Round: 11 00001000001110110110101000100000 10100110010011111101000001111010 000011110100000111011001000100000001111010100100

Round: 12 10100110010011111101000001111010 10010001010101111010010110001101 000111110100000110011001100110000010100010110101

Round: 13 10010001010101111010010110001101 11111000010111001001111101001101 000111110000100110001001001000110110101010010001

Round: 14 11111000010111001001111101001101 00010001101100001110001100100000 000110110010100010001101001100110010000100010011

Round: 15 00010001101100001110001100100000 00101110111101000100111000101111 000110010010110010001100101001110000000100000110

Round: 16 00101110111101000100111000101111 11101100101110000110001111011110 010100010010110010001100000101110000001111000010

Round: Swap 11101100101110000110001111011110 00101110111101000100111000101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 2030303030303030

After Initial Permutation: 00FE000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100101110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100101110011110110001 11000010011010100001100001001010 010100001010110010100100010101001010000101000001

Round: 3 11000010011010100001100001001010 10100011100000101100010110101101 110100001010110000100110011000101010010001001100

Round: 4 10100011100000101100010110101101 01011001101001100000111100100001 111000001010011000100110011010001011010110001010

Round: 5 01011001101001100000111100100001 01110110111100100010001101001001 111000001001011000100110001011000101010000101011

Round: 6 01110110111100100010001101001001 10011010000101111111101010110100 111000001001001001110010010011100101100001100010

Round: 7 10011010000101111111101010110100 01011101000000110011000100100001 101001001101001001110010100001001100100101111000

Round: 8 01011101000000110011000100100001 10110010000101110011001111100101 101001100101001101010010100000011001111001010000

Round: 9 10110010000101110011001111100101 00101101111000111111100010000111 001001100101001101010011110010010001001001011000

Round: 10 00101101111000111111100010000111 00001101100001010110100011101011 001011110101000101010001100100011101001000101100

Round: 11 00001101100001010110100011101011 11001001101000011110100010100000 000011110100000111011001000100000001111010100100

Round: 12 11001001101000011110100010100000 00100000100001111001101010101000 000111110100000110011001100110000010100010110101

Round: 13 00100000100001111001101010101000 00011001010111000000001110101011 000111110000100110001001001000110110101010010001

Round: 14 00011001010111000000001110101011 11001111000011111110001000011101 000110110010100010001101001100110010000100010011

Round: 15 11001111000011111110001000011101 11111010100010101101011000000001 000110010010110010001100101001110000000100000110

Round: 16 11111010100010101101011000000001 01001111100010111000111110010010 010100010010110010001100000101110000001111000010

Round: Swap 01001111100010111000111110010010 11111010100010101101011000000001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313030313131

After Initial Permutation: 00FF00E700FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101010110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101010110 01111010110011101000011001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000011001000000 10101000111111001001101111011010 110100001010110000100110011000101010010001001100

Round: 4 10101000111111001001101111011010 11100110111000001110101100000011 111000001010011000100110011010001011010110001010

Round: 5 11100110111000001110101100000011 10000101001100100010111001111001 111000001001011000100110001011000101010000101011

Round: 6 10000101001100100010111001111001 01001011110111011011110110111110 111000001001001001110010010011100101100001100010

Round: 7 01001011110111011011110110111110 10101000010001101001111011110000 101001001101001001110010100001001100100101111000

Round: 8 10101000010001101001111011110000 10110010111110110101010101000101 101001100101001101010010100000011001111001010000

Round: 9 10110010111110110101010101000101 11001101110110110101001111000010 001001100101001101010011110010010001001001011000

Round: 10 11001101110110110101001111000010 10100110001111100010001111101000 001011110101000101010001100100011101001000101100

Round: 11 10100110001111100010001111101000 11010111011000110011110001001100 000011110100000111011001000100000001111010100100

Round: 12 11010111011000110011110001001100 00111011001010010000000000000110 000111110100000110011001100110000010100010110101

Round: 13 00111011001010010000000000000110 10001000100010101011001010011000 000111110000100110001001001000110110101010010001

Round: 14 10001000100010101011001010011000 10100111110100100000101101001001 000110110010100010001101001100110010000100010011

Round: 15 10100111110100100000101101001001 11001001000000010100011001110101 000110010010110010001100101001110000000100000110

Round: 16 11001001000000010100011001110101 11110001101010110110101010111010 010100010010110010001100000101110000001111000010

Round: Swap 11110001101010110110101010111010 11001001000000010100011001110101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3130303030303030

After Initial Permutation: 00FF000100FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110000 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110000 01100010111011001000001001001000 010100001010110010100100010101001010000101000001

Round: 3 01100010111011001000001001001000 01101010110011111101010001000010 110100001010110000100110011000101010010001001100

Round: 4 01101010110011111101010001000010 01100100110010011111100100011010 111000001010011000100110011010001011010110001010

Round: 5 01100100110010011111100100011010 10101101011100001010010101011000 111000001001011000100110001011000101010000101011

Round: 6 10101101011100001010010101011000 11110101101011011110000100111000 111000001001001001110010010011100101100001100010

Round: 7 11110101101011011110000100111000 11110110101110110110001000011101 101001001101001001110010100001001100100101111000

Round: 8 11110110101110110110001000011101 00011110000111101100001111101010 101001100101001101010010100000011001111001010000

Round: 9 00011110000111101100001111101010 00011011001011001111110001000111 001001100101001101010011110010010001001001011000

Round: 10 00011011001011001111110001000111 00010010101000010000101011111000 001011110101000101010001100100011101001000101100

Round: 11 00010010101000010000101011111000 00011000010100101101010100010110 000011110100000111011001000100000001111010100100

Round: 12 00011000010100101101010100010110 00010110000110001000101110111110 000111110100000110011001100110000010100010110101

Round: 13 00010110000110001000101110111110 10110100010100110000011010001101 000111110000100110001001001000110110101010010001

Round: 14 10110100010100110000011010001101 10100100100011100010100000010100 000110110010100010001101001100110010000100010011

Round: 15 10100100100011100010100000010100 00001100110011110110100100101000 000110010010110010001100101001110000000100000110

Round: 16 00001100110011110110100100101000 11111011011011101010010110011100 010100010010110010001100000101110000001111000010

Round: Swap 11111011011011101010010110011100 00001100110011110110100100101000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3020303030303030

After Initial Permutation: 00FD000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100011110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100011110011110110001 11100010011011100001100000001010 010100001010110010100100010101001010000101000001

Round: 3 11100010011011100001100000001010 00100011010100010100001110101111 110100001010110000100110011000101010010001001100

Round: 4 00100011010100010100001110101111 10000101000011000100010001000011 111000001010011000100110011010001011010110001010

Round: 5 10000101000011000100010001000011 00011100010010110011000000011011 111000001001011000100110001011000101010000101011

Round: 6 00011100010010110011000000011011 01000101000101101000110100001101 111000001001001001110010010011100101100001100010

Round: 7 01000101000101101000110100001101 11110001010011010111110111000011 101001001101001001110010100001001100100101111000

Round: 8 11110001010011010111110111000011 00111111101001011100011100010110 101001100101001101010010100000011001111001010000

Round: 9 00111111101001011100011100010110 01101100100111110111110000000111 001001100101001101010011110010010001001001011000

Round: 10 01101100100111110111110000000111 00010001000110101000101111000011 001011110101000101010001100100011101001000101100

Round: 11 00010001000110101000101111000011 11000111010100001010001010011100 000011110100000111011001000100000001111010100100

Round: 12 11000111010100001010001010011100 11111110101110001101001111000110 000111110100000110011001100110000010100010110101

Round: 13 11111110101110001101001111000110 01101111011011010011001010110111 000111110000100110001001001000110110101010010001

Round: 14 01101111011011010011001010110111 11001111000001101000001010111001 000110110010100010001101001100110010000100010011

Round: 15 11001111000001101000001010111001 10100000111011001100111101110101 000110010010110010001100101001110000000100000110

Round: 16 10100000111011001100111101110101 11001010011100110010011000011101 010100010010110010001100000101110000001111000010

Round: Swap 11001010011100110010011000011101 10100000111011001100111101110101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031303030303031

After Initial Permutation: 00FF008200FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100110011 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100110011 01110010010111000000110001100011 010100001010110010100100010101001010000101000001

Round: 3 01110010010111000000110001100011 10101100011100001011111111010000 110100001010110000100110011000101010010001001100

Round: 4 10101100011100001011111111010000 10011101010010110101100001111101 111000001010011000100110011010001011010110001010

Round: 5 10011101010010110101100001111101 01100100001001111000100110000000 111000001001011000100110001011000101010000101011

Round: 6 01100100001001111000100110000000 11000101101110000001010011111010 111000001001001001110010010011100101100001100010

Round: 7 11000101101110000001010011111010 10100011000111000001000111110110 101001001101001001110010100001001100100101111000

Round: 8 10100011000111000001000111110110 01010111111000101011001000010010 101001100101001101010010100000011001111001010000

Round: 9 01010111111000101011001000010010 01000001100101011110101111010101 001001100101001101010011110010010001001001011000

Round: 10 01000001100101011110101111010101 00110001000100100011011010100111 001011110101000101010001100100011101001000101100

Round: 11 00110001000100100011011010100111 01011100010010001010111011101100 000011110100000111011001000100000001111010100100

Round: 12 01011100010010001010111011101100 01001000100001100111010100100000 000111110100000110011001100110000010100010110101

Round: 13 01001000100001100111010100100000 11110110100100011100111110010101 000111110000100110001001001000110110101010010001

Round: 14 11110110100100011100111110010101 11010100101001000000111001011111 000110110010100010001101001100110010000100010011

Round: 15 11010100101001000000111001011111 11100011110100110001001001001110 000110010010110010001100101001110000000100000110

Round: 16 11100011110100110001001001001110 01110100110100110110100010011010 010100010010110010001100000101110000001111000010

Round: Swap 01110100110100110110100010011010 11100011110100110001001001001110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131303030303030

After Initial Permutation: 00FF000300FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110010 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110010 01101010111011001000001001101000 010100001010110010100100010101001010000101000001

Round: 3 01101010111011001000001001101000 00101000010001111001000001000010 110100001010110000100110011000101010010001001100

Round: 4 00101000010001111001000001000010 01101101101011000010100010100000 111000001010011000100110011010001011010110001010

Round: 5 01101101101011000010100010100000 01100000011000011110011111010000 111000001001011000100110001011000101010000101011

Round: 6 01100000011000011110011111010000 10011110001100100110110011110011 111000001001001001110010010011100101100001100010

Round: 7 10011110001100100110110011110011 10010000111011111001001001011110 101001001101001001110010100001001100100101111000

Round: 8 10010000111011111001001001011110 10100000001011100110100011110010 101001100101001101010010100000011001111001010000

Round: 9 10100000001011100110100011110010 01100000101101001001000011110001 001001100101001101010011110010010001001001011000

Round: 10 01100000101101001001000011110001 00010010000100100101011111100010 001011110101000101010001100100011101001000101100

Round: 11 00010010000100100101011111100010 01100000110010101111110001010000 000011110100000111011001000100000001111010100100

Round: 12 01100000110010101111110001010000 11000111000000000011010100011011 000111110100000110011001100110000010100010110101

Round: 13 11000111000000000011010100011011 00100000000101110000010111001110 000111110000100110001001001000110110101010010001

Round: 14 00100000000101110000010111001110 01100001011011011010000011110011 000110110010100010001101001100110010000100010011

Round: 15 01100001011011011010000011110011 00110101001111011111101110101111 000110010010110010001100101001110000000100000110

Round: 16 00110101001111011111101110101111 11001111100101000110000000010011 010100010010110010001100000101110000001111000010

Round: Swap 11001111100101000110000000010011 00110101001111011111101110101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030203030303030

After Initial Permutation: 00FB000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101101111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101101111110011110110001 11100010001011100001100001001010 010100001010110010100100010101001010000101000001

Round: 3 11100010001011100001100001001010 00100011010001100100011010101111 110100001010110000100110011000101010010001001100

Round: 4 00100011010001100100011010101111 00010110010010000111000100000110 111000001010011000100110011010001011010110001010

Round: 5 00010110010010000111000100000110 01110011100011000101100001000010 111000001001011000100110001011000101010000101011

Round: 6 01110011100011000101100001000010 10100001000011011001101101001100 111000001001001001110010010011100101100001100010

Round: 7 10100001000011011001101101001100 00000011110000101111101100011011 101001001101001001110010100001001100100101111000

Round: 8 00000011110000101111101100011011 11010001101001000000010010011001 101001100101001101010010100000011001111001010000

Round: 9 11010001101001000000010010011001 01111110001010001111110001000100 001001100101001101010011110010010001001001011000

Round: 10 01111110001010001111110001000100 00010001010110001101010110101111 001011110101000101010001100100011101001000101100

Round: 11 00010001010110001101010110101111 01001011101000100010001000010011 000011110100000111011001000100000001111010100100

Round: 12 01001011101000100010001000010011 00000111101100001110111101000101 000111110100000110011001100110000010100010110101

Round: 13 00000111101100001110111101000101 01100100100011000111010011110010 000111110000100110001001001000110110101010010001

Round: 14 01100100100011000111010011110010 00010010010101010000100001010010 000110110010100010001101001100110010000100010011

Round: 15 00010010010101010000100001010010 00011010000110111101110001100001 000110010010110010001100101001110000000100000110

Round: 16 00011010000110111101110001100001 11001011100110001111001011110010 010100010010110010001100000101110000001111000010

Round: Swap 11001011100110001111001011110010 00011010000110111101110001100001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030313030303030

After Initial Permutation: 00FF000400FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110101 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110101 01101010011011000000000001001010 010100001010110010100100010101001010000101000001

Round: 3 01101010011011000000000001001010 01110011001011111111110110010001 110100001010110000100110011000101010010001001100

Round: 4 01110011001011111111110110010001 01100001110000001111110000010111 111000001010011000100110011010001011010110001010

Round: 5 01100001110000001111110000010111 00001111011101100010011000110000 111000001001011000100110001011000101010000101011

Round: 6 00001111011101100010011000110000 10110000000010101100111011010110 111000001001001001110010010011100101100001100010

Round: 7 10110000000010101100111011010110 00001111100000011011011010001111 101001001101001001110010100001001100100101111000

Round: 8 00001111100000011011011010001111 11010001000111101001010001011011 101001100101001101010010100000011001111001010000

Round: 9 11010001000111101001010001011011 11000101001001011110100011110100 001001100101001101010011110010010001001001011000

Round: 10 11000101001001011110100011110100 11111111001001100100101010110011 001011110101000101010001100100011101001000101100

Round: 11 11111111001001100100101010110011 10101110010110110000010111010010 000011110100000111011001000100000001111010100100

Round: 12 10101110010110110000010111010010 10010101100111010110100011111111 000111110100000110011001100110000010100010110101

Round: 13 10010101100111010110100011111111 10111011010101000101011111011000 000111110000100110001001001000110110101010010001

Round: 14 10111011010101000101011111011000 10111101001001100100001011111010 000110110010100010001101001100110010000100010011

Round: 15 10111101001001100100001011111010 01010100100011010110000101111101 000110010010110010001100101001110000000100000110

Round: 16 01010100100011010110000101111101 00010111001001000001101111001110 010100010010110010001100000101110000001111000010

Round: Swap 00010111001001000001101111001110 01010100100011010110000101111101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313130303030

After Initial Permutation: 00FF000E00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110111111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110111111 01101010011011000000110001001011 010100001010110010100100010101001010000101000001

Round: 3 01101010011011000000110001001011 01100010001010111111011100111001 110100001010110000100110011000101010010001001100

Round: 4 01100010001010111111011100111001 11000100010011111000011100111110 111000001010011000100110011010001011010110001010

Round: 5 11000100010011111000011100111110 00111000001111010010001101010100 111000001001011000100110001011000101010000101011

Round: 6 00111000001111010010001101010100 11101011111011000010111100011101 111000001001001001110010010011100101100001100010

Round: 7 11101011111011000010111100011101 10000000011011111000110100111001 101001001101001001110010100001001100100101111000

Round: 8 10000000011011111000110100111001 10011001010000000000011000010011 101001100101001101010010100000011001111001010000

Round: 9 10011001010000000000011000010011 01101111100001001011011000111000 001001100101001101010011110010010001001001011000

Round: 10 01101111100001001011011000111000 00100000001000010010001101100100 001011110101000101010001100100011101001000101100

Round: 11 00100000001000010010001101100100 01100001111110110011001001001100 000011110100000111011001000100000001111010100100

Round: 12 01100001111110110011001001001100 00101100001110010000000010111000 000111110100000110011001100110000010100010110101

Round: 13 00101100001110010000000010111000 10100110100100011000011011000100 000111110000100110001001001000110110101010010001

Round: 14 10100110100100011000011011000100 10111000101000010111011111110100 000110110010100010001101001100110010000100010011

Round: 15 10111000101000010111011111110100 10111001010011011000110110100100 000110010010110010001100101001110000000100000110

Round: 16 10111001010011011000110110100100 10111101001001111100100010111010 010100010010110010001100000101110000001111000010

Round: Swap 10111101001001111100100010111010 10111001010011011000110110100100 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030302030303030

After Initial Permutation: 00F7000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101110111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101110111110011110110001 11100110001011100001100100001010 010100001010110010100100010101001010000101000001

Round: 3 11100110001011100001100100001010 01110001010100100110001010101110 110100001010110000100110011000101010010001001100

Round: 4 01110001010100100110001010101110 00011011001000001000101111101000 111000001010011000100110011010001011010110001010

Round: 5 00011011001000001000101111101000 01100001000110110001111110000011 111000001001011000100110001011000101010000101011

Round: 6 01100001000110110001111110000011 01111110010101010011110000000101 111000001001001001110010010011100101100001100010

Round: 7 01111110010101010011110000000101 10000111010000000101111111101100 101001001101001001110010100001001100100101111000

Round: 8 10000111010000000101111111101100 00110011100110100101101110011101 101001100101001101010010100000011001111001010000

Round: 9 00110011100110100101101110011101 10001000000100111010010101100010 001001100101001101010011110010010001001001011000

Round: 10 10001000000100111010010101100010 01100100011100100100111011110110 001011110101000101010001100100011101001000101100

Round: 11 01100100011100100100111011110110 11101111010101011000000101001101 000011110100000111011001000100000001111010100100

Round: 12 11101111010101011000000101001101 11010011111101000100110001101011 000111110100000110011001100110000010100010110101

Round: 13 11010011111101000100110001101011 00101010001110010010001011101000 000111110000100110001001001000110110101010010001

Round: 14 00101010001110010010001011101000 10011110000111111011001110000001 000110110010100010001101001100110010000100010011

Round: 15 10011110000111111011001110000001 00110010000011000111110001000010 000110010010110010001100101001110000000100000110

Round: 16 00110010000011000111110001000010 11001001100011101001010001110101 010100010010110010001100000101110000001111000010

Round: Swap 11001001100011101001010001110101 00110010000011000111110001000010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030313131

After Initial Permutation: 00FF00E000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101010001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101010001 01110010010011100000110001000010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011100000110001000010 00100100011100011010000011110101 110100001010110000100110011000101010010001001100

Round: 4 00100100011100011010000011110101 11110101001111010100000000100111 111000001010011000100110011010001011010110001010

Round: 5 11110101001111010100000000100111 00100111011110001011000111011110 111000001001011000100110001011000101010000101011

Round: 6 00100111011110001011000111011110 10100001000111111010110111011100 111000001001001001110010010011100101100001100010

Round: 7 10100001000111111010110111011100 01010001010100010011101001000010 101001001101001001110010100001001100100101111000

Round: 8 01010001010100010011101001000010 01110010111110010101010110000101 101001100101001101010010100000011001111001010000

Round: 9 01110010111110010101010110000101 10101100000011000101010101011011 001001100101001101010011110010010001001001011000

Round: 10 10101100000011000101010101011011 01111101100110110110000010111100 001011110101000101010001100100011101001000101100

Round: 11 01111101100110110110000010111100 11110101100001000101001110100100 000011110100000111011001000100000001111010100100

Round: 12 11110101100001000101001110100100 01011111001011100011110100001110 000111110100000110011001100110000010100010110101

Round: 13 01011111001011100011110100001110 11010011011001110101100110011011 000111110000100110001001001000110110101010010001

Round: 14 11010011011001110101100110011011 00101001000110111011100111101101 000110110010100010001101001100110010000100010011

Round: 15 00101001000110111011100111101101 00101010100111111010110110100110 000110010010110010001100101001110000000100000110

Round: 16 00101010100111111010110110100110 01001100100111111100011101110101 010100010010110010001100000101110000001111000010

Round: Swap 01001100100111111100011101110101 00101010100111111010110110100110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3130303131303030

After Initial Permutation: 00FF001900FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110101000 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110101000 01101000111111101000011001101001 010100001010110010100100010101001010000101000001

Round: 3 01101000111111101000011001101001 00100100011011001000101101000110 110100001010110000100110011000101010010001001100

Round: 4 00100100011011001000101101000110 01001100100110110111001010001011 111000001010011000100110011010001011010110001010

Round: 5 01001100100110110111001010001011 10110111111100111110100101100111 111000001001011000100110001011000101010000101011

Round: 6 10110111111100111110100101100111 00000011011100110001001010000111 111000001001001001110010010011100101100001100010

Round: 7 00000011011100110001001010000111 11001110011100110100001110000111 101001001101001001110010100001001100100101111000

Round: 8 11001110011100110100001110000111 10110111000001000011000000000001 101001100101001101010010100000011001111001010000

Round: 9 10110111000001000011000000000001 10010111100001011110001011100101 001001100101001101010011110010010001001001011000

Round: 10 10010111100001011110001011100101 10000100101000110010101101101100 001011110101000101010001100100011101001000101100

Round: 11 10000100101000110010101101101100 01100110101111110110000100011100 000011110100000111011001000100000001111010100100

Round: 12 01100110101111110110000100011100 10010111111100010011000111000001 000111110100000110011001100110000010100010110101

Round: 13 10010111111100010011000111000001 11111011101011110000101000000011 000111110000100110001001001000110110101010010001

Round: 14 11111011101011110000101000000011 00010111001100100000111001011101 000110110010100010001101001100110010000100010011

Round: 15 00010111001100100000111001011101 10101010001011101001010111101010 000110010010110010001100101001110000000100000110

Round: 16 10101010001011101001010111101010 01001000000010000011001011001000 010100010010110010001100000101110000001111000010

Round: Swap 01001000000010000011001011001000 10101010001011101001010111101010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303020303030

After Initial Permutation: 00EF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101000111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101000111110011110110001 11100110001011110001100101001010 010100001010110010100100010101001010000101000001

Round: 3 11100110001011110001100101001010 11010000000011100111011010101111 110100001010110000100110011000101010010001001100

Round: 4 11010000000011100111011010101111 11000110011011001011100011110010 111000001010011000100110011010001011010110001010

Round: 5 11000110011011001011100011110010 11010111010110111110111001110110 111000001001011000100110001011000101010000101011

Round: 6 11010111010110111110111001110110 01000101000111011111110010011100 111000001001001001110010010011100101100001100010

Round: 7 01000101000111011111110010011100 10111010100110100001010101000001 101001001101001001110010100001001100100101111000

Round: 8 10111010100110100001010101000001 01010101001001010011001100110111 101001100101001101010010100000011001111001010000

Round: 9 01010101001001010011001100110111 01010000001000111011100111111101 001001100101001101010011110010010001001001011000

Round: 10 01010000001000111011100111111101 11011011100101101100010000010100 001011110101000101010001100100011101001000101100

Round: 11 11011011100101101100010000010100 11010001010011000101000001000011 000011110100000111011001000100000001111010100100

Round: 12 11010001010011000101000001000011 01101101101110010001001011101000 000111110100000110011001100110000010100010110101

Round: 13 01101101101110010001001011101000 00110010100100001010111001010100 000111110000100110001001001000110110101010010001

Round: 14 00110010100100001010111001010100 10001011010000011010100101001101 000110110010100010001101001100110010000100010011

Round: 15 10001011010000011010100101001101 10101011011111010010000011011101 000110010010110010001100101001110000000100000110

Round: 16 10101011011111010010000011011101 10111100101010100001001010001010 010100010010110010001100000101110000001111000010

Round: Swap 10111100101010100001001010001010 10101011011111010010000011011101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030313131

After Initial Permutation: 00FF00E000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101010001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101010001 01110010010011100000110001000010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011100000110001000010 00100100011100011010000011110101 110100001010110000100110011000101010010001001100

Round: 4 00100100011100011010000011110101 11110101001111010100000000100111 111000001010011000100110011010001011010110001010

Round: 5 11110101001111010100000000100111 00100111011110001011000111011110 111000001001011000100110001011000101010000101011

Round: 6 00100111011110001011000111011110 10100001000111111010110111011100 111000001001001001110010010011100101100001100010

Round: 7 10100001000111111010110111011100 01010001010100010011101001000010 101001001101001001110010100001001100100101111000

Round: 8 01010001010100010011101001000010 01110010111110010101010110000101 101001100101001101010010100000011001111001010000

Round: 9 01110010111110010101010110000101 10101100000011000101010101011011 001001100101001101010011110010010001001001011000

Round: 10 10101100000011000101010101011011 01111101100110110110000010111100 001011110101000101010001100100011101001000101100

Round: 11 01111101100110110110000010111100 11110101100001000101001110100100 000011110100000111011001000100000001111010100100

Round: 12 11110101100001000101001110100100 01011111001011100011110100001110 000111110100000110011001100110000010100010110101

Round: 13 01011111001011100011110100001110 11010011011001110101100110011011 000111110000100110001001001000110110101010010001

Round: 14 11010011011001110101100110011011 00101001000110111011100111101101 000110110010100010001101001100110010000100010011

Round: 15 00101001000110111011100111101101 00101010100111111010110110100110 000110010010110010001100101001110000000100000110

Round: 16 00101010100111111010110110100110 01001100100111111100011101110101 010100010010110010001100000101110000001111000010

Round: Swap 01001100100111111100011101110101 00101010100111111010110110100110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131303031313030

After Initial Permutation: 00FF003300FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110000010 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110000010 01101000111111101000101001101000 010100001010110010100100010101001010000101000001

Round: 3 01101000111111101000101001101000 00001100010011101010000111101110 110100001010110000100110011000101010010001001100

Round: 4 00001100010011101010000111101110 10110000001010001111100011011100 111000001010011000100110011010001011010110001010

Round: 5 10110000001010001111100011011100 11100010100011111110101000100001 111000001001011000100110001011000101010000101011

Round: 6 11100010100011111110101000100001 01100111100110100000100110011011 111000001001001001110010010011100101100001100010

Round: 7 01100111100110100000100110011011 01110000110110110010010100100111 101001001101001001110010100001001100100101111000

Round: 8 01110000110110110010010100100111 11100011100101011010000111111110 101001100101001101010010100000011001111001010000

Round: 9 11100011100101011010000111111110 10001000010100001001010000011110 001001100101001101010011110010010001001001011000

Round: 10 10001000010100001001010000011110 00001001010110011001000010011001 001011110101000101010001100100011101001000101100

Round: 11 00001001010110011001000010011001 01110110000111101111010001111000 000011110100000111011001000100000001111010100100

Round: 12 01110110000111101111010001111000 10010001110101010001111001101000 000111110100000110011001100110000010100010110101

Round: 13 10010001110101010001111001101000 11111111111110100110110010011101 000111110000100110001001001000110110101010010001

Round: 14 11111111111110100110110010011101 10011100010010000010010110100101 000110110010100010001101001100110010000100010011

Round: 15 10011100010010000010010110100101 11111011111110010111001000101110 000110010010110010001100101001110000000100000110

Round: 16 11111011111110010111001000101110 11011101011001110001011100100001 010100010010110010001100000101110000001111000010

Round: Swap 11011101011001110001011100100001 11111011111110010111001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030203030

After Initial Permutation: 00DF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000100100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000100100111110011110110001 01100110011011100000100101001010 010100001010110010100100010101001010000101000001

Round: 3 01100110011011100000100101001010 01100000110110111100110100000111 110100001010110000100110011000101010010001001100

Round: 4 01100000110110111100110100000111 00101011010011111001101101000111 111000001010011000100110011010001011010110001010

Round: 5 00101011010011111001101101000111 01111000111111001001111111111101 111000001001011000100110001011000101010000101011

Round: 6 01111000111111001001111111111101 10101101101001101110000110101001 111000001001001001110010010011100101100001100010

Round: 7 10101101101001101110000110101001 01010010101100101110101110100001 101001001101001001110010100001001100100101111000

Round: 8 01010010101100101110101110100001 01010011011010100010101011111111 101001100101001101010010100000011001111001010000

Round: 9 01010011011010100010101011111111 11100101000010110011011010110001 001001100101001101010011110010010001001001011000

Round: 10 11100101000010110011011010110001 11010000110001111101100011010111 001011110101000101010001100100011101001000101100

Round: 11 11010000110001111101100011010111 01000011101010010100110000111001 000011110100000111011001000100000001111010100100

Round: 12 01000011101010010100110000111001 00111110101101100110101110001000 000111110100000110011001100110000010100010110101

Round: 13 00111110101101100110101110001000 01000101001100011100001110110100 000111110000100110001001001000110110101010010001

Round: 14 01000101001100011100001110110100 10111001001010100001011011101001 000110110010100010001101001100110010000100010011

Round: 15 10111001001010100001011011101001 11000100010101100110011001010010 000110010010110010001100101001110000000100000110

Round: 16 11000100010101100110011001010010 10101111110011010011100010001010 010100010010110010001100000101110000001111000010

Round: Swap 10101111110011010011100010001010 11000100010101100110011001010010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313130303130

After Initial Permutation: 00FF004F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011111111110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011111111110 01100010111011001000001001101000 010100001010110010100100010101001010000101000001

Round: 3 01100010111011001000001001101000 01101000110011111101000000001100 110100001010110000100110011000101010010001001100

Round: 4 01101000110011111101000000001100 01101110111100011111100100100011 111000001010011000100110011010001011010110001010

Round: 5 01101110111100011111100100100011 10100001001110100111010101000000 111000001001011000100110001011000101010000101011

Round: 6 10100001001110100111010101000000 10101111101000011101001100101011 111000001001001001110010010011100101100001100010

Round: 7 10101111101000011101001100101011 01011000001010100011110100110100 101001001101001001110010100001001100100101111000

Round: 8 01011000001010100011110100110100 00000111110101101011111110001101 101001100101001101010010100000011001111001010000

Round: 9 00000111110101101011111110001101 01011101000011001000110100100000 001001100101001101010011110010010001001001011000

Round: 10 01011101000011001000110100100000 01001101011011010011100110111101 001011110101000101010001100100011101001000101100

Round: 11 01001101011011010011100110111101 01011010000011110100011001000100 000011110100000111011001000100000001111010100100

Round: 12 01011010000011110100011001000100 10011011111000110110111000001111 000111110100000110011001100110000010100010110101

Round: 13 10011011111000110110111000001111 10001011110110100000111001010110 000111110000100110001001001000110110101010010001

Round: 14 10001011110110100000111001010110 11110000010111100101110101001100 000110110010100010001101001100110010000100010011

Round: 15 11110000010111100101110101001100 00001111101100001001101110010001 000110010010110010001100101001110000000100000110

Round: 16 00001111101100001001101110010001 01010111011100000100001010101110 010100010010110010001100000101110000001111000010

Round: Swap 01010111011100000100001010101110 00001111101100001001101110010001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030302030

After Initial Permutation: 00BF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000111100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000111100111110011110110001 01100110011011110000100001001110 010100001010110010100100010101001010000101000001

Round: 3 01100110011011110000100001001110 11011011111010011101010100101111 110100001010110000100110011000101010010001001100

Round: 4 11011011111010011101010100101111 10100000111100001001101101110100 111000001010011000100110011010001011010110001010

Round: 5 10100000111100001001101101110100 00101010110011101100001000110011 111000001001011000100110001011000101010000101011

Round: 6 00101010110011101100001000110011 10001100111101001101100110101111 111000001001001001110010010011100101100001100010

Round: 7 10001100111101001101100110101111 01011000100011010110111111011101 101001001101001001110010100001001100100101111000

Round: 8 01011000100011010110111111011101 11110111110100000111110110000010 101001100101001101010010100000011001111001010000

Round: 9 11110111110100000111110110000010 00100100000100010011000111011010 001001100101001101010011110010010001001001011000

Round: 10 00100100000100010011000111011010 10110000111011000110010010111000 001011110101000101010001100100011101001000101100

Round: 11 10110000111011000110010010111000 10010100100101101100010100111011 000011110100000111011001000100000001111010100100

Round: 12 10010100100101101100010100111011 01100011101000110000001100111011 000111110100000110011001100110000010100010110101

Round: 13 01100011101000110000001100111011 00010011011111011110110010000001 000111110000100110001001001000110110101010010001

Round: 14 00010011011111011110110010000001 00101001011001101011000111010110 000110110010100010001101001100110010000100010011

Round: 15 00101001011001101011000111010110 11111011111101010001101101110011 000110010010110010001100101001110000000100000110

Round: 16 11111011111101010001101101110011 01010100110111011001010001111000 010100010010110010001100000101110000001111000010

Round: Swap 01010100110111011001010001111000 11111011111101010001101101110011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313130303031

After Initial Permutation: 00FF008E00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100111111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100111111 01111000010011000000100001000010 010100001010110010100100010101001010000101000001

Round: 3 01111000010011000000100001000010 01110100101100011001001010010011 110100001010110000100110011000101010010001001100

Round: 4 01110100101100011001001010010011 11110101101001111010110010100010 111000001010011000100110011010001011010110001010

Round: 5 11110101101001111010110010100010 00110001011111111011011001001111 111000001001011000100110001011000101010000101011

Round: 6 00110001011111111011011001001111 10110000100110110100011110011001 111000001001001001110010010011100101100001100010

Round: 7 10110000100110110100011110011001 00100011100000001100101000010111 101001001101001001110010100001001100100101111000

Round: 8 00100011100000001100101000010111 01101001010100111111001100001111 101001100101001101010010100000011001111001010000

Round: 9 01101001010100111111001100001111 10000010011110000110100010101110 001001100101001101010011110010010001001001011000

Round: 10 10000010011110000110100010101110 10000101001110010011101100100000 001011110101000101010001100100011101001000101100

Round: 11 10000101001110010011101100100000 01001101010100111000101110010110 000011110100000111011001000100000001111010100100

Round: 12 01001101010100111000101110010110 10010010101110010100111110101100 000111110100000110011001100110000010100010110101

Round: 13 10010010101110010100111110101100 11111100100000000111111100110110 000111110000100110001001001000110110101010010001

Round: 14 11111100100000000111111100110110 11111111000010010100111100100110 000110110010100010001101001100110010000100010011

Round: 15 11111111000010010100111100100110 01111110011010100000011011100100 000110010010110010001100101001110000000100000110

Round: 16 01111110011010100000011011100100 01100101010010101000001011000100 010100010010110010001100000101110000001111000010

Round: Swap 01100101010010101000001011000100 01111110011010100000011011100100 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303020

After Initial Permutation: 007F000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000001100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000001100111110011110110001 01100010011001110100100001001110 010100001010110010100100010101001010000101000001

Round: 3 01100010011001110100100001001110 00011010001001001101010001101111 110100001010110000100110011000101010010001001100

Round: 4 00011010001001001101010001101111 00100000010111011010010010011001 111000001010011000100110011010001011010110001010

Round: 5 00100000010111011010010010011001 01111010010011001000010110110111 111000001001011000100110001011000101010000101011

Round: 6 01111010010011001000010110110111 11001001111001111000111100001110 111000001001001001110010010011100101100001100010

Round: 7 11001001111001111000111100001110 00100011100001110010001010011001 101001001101001001110010100001001100100101111000

Round: 8 00100011100001110010001010011001 10000011011010010011001100010000 101001100101001101010010100000011001111001010000

Round: 9 10000011011010010011001100010000 10000111001111000001101101010011 001001100101001101010011110010010001001001011000

Round: 10 10000111001111000001101101010011 10100011001111100101101111001100 001011110101000101010001100100011101001000101100

Round: 11 10100011001111100101101111001100 10110011100101110001100001110001 000011110100000111011001000100000001111010100100

Round: 12 10110011100101110001100001110001 00101001011011001101111100101010 000111110100000110011001100110000010100010110101

Round: 13 00101001011011001101111100101010 01101011100111101011010001000000 000111110000100110001001001000110110101010010001

Round: 14 01101011100111101011010001000000 11101001000001001110010101000111 000110110010100010001101001100110010000100010011

Round: 15 11101001000001001110010101000111 10110101110001011101000100011000 000110010010110010001100101001110000000100000110

Round: 16 10110101110001011101000100011000 01010111000101000101000111101011 010100010010110010001100000101110000001111000010

Round: Swap 01010111000101000101000111101011 10110101110001011101000100011000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303031

After Initial Permutation: 00FF008000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100110001 01110010010111100000110001000011 010100001010110010100100010101001010000101000001

Round: 3 01110010010111100000110001000011 00101100001100001011101111010011 110100001010110000100110011000101010010001001100

Round: 4 00101100001100001011101111010011 10001001011010000111101101110001 111000001010011000100110011010001011010110001010

Round: 5 10001001011010000111101101110001 00111100110111110110110010111111 111000001001011000100110001011000101010000101011

Round: 6 00111100110111110110110010111111 00010100110011010001101010000000 111000001001001001110010010011100101100001100010

Round: 7 00010100110011010001101010000000 01110001011110010011010011000101 101001001101001001110010100001001100100101111000

Round: 8 01110001011110010011010011000101 01110100101111001111111011011100 101001100101001101010010100000011001111001010000

Round: 9 01110100101111001111111011011100 10100001001010101111110000101100 001001100101001101010011110010010001001001011000

Round: 10 10100001001010101111110000101100 01111010010100011110011110001100 001011110101000101010001100100011101001000101100

Round: 11 01111010010100011110011110001100 11110011111001111011011010011011 000011110100000111011001000100000001111010100100

Round: 12 11110011111001111011011010011011 11101001111100111111010010001001 000111110100000110011001100110000010100010110101

Round: 13 11101001111100111111010010001001 01000111011010011010000111011111 000111110000100110001001001000110110101010010001

Round: 14 01000111011010011010000111011111 00110001000001111100011101001110 000110110010100010001101001100110010000100010011

Round: 15 00110001000001111100011101001110 01100011110011000110011010000110 000110010010110010001100101001110000000100000110

Round: 16 01100011110011000110011010000110 00100001000100100000101100001100 010100010010110010001100000101110000001111000010

Round: Swap 00100001000100100000101100001100 01100011110011000110011010000110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3130303030303030

After Initial Permutation: 00FF000100FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110000 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110000 01100010111011001000001001001000 010100001010110010100100010101001010000101000001

Round: 3 01100010111011001000001001001000 01101010110011111101010001000010 110100001010110000100110011000101010010001001100

Round: 4 01101010110011111101010001000010 01100100110010011111100100011010 111000001010011000100110011010001011010110001010

Round: 5 01100100110010011111100100011010 10101101011100001010010101011000 111000001001011000100110001011000101010000101011

Round: 6 10101101011100001010010101011000 11110101101011011110000100111000 111000001001001001110010010011100101100001100010

Round: 7 11110101101011011110000100111000 11110110101110110110001000011101 101001001101001001110010100001001100100101111000

Round: 8 11110110101110110110001000011101 00011110000111101100001111101010 101001100101001101010010100000011001111001010000

Round: 9 00011110000111101100001111101010 00011011001011001111110001000111 001001100101001101010011110010010001001001011000

Round: 10 00011011001011001111110001000111 00010010101000010000101011111000 001011110101000101010001100100011101001000101100

Round: 11 00010010101000010000101011111000 00011000010100101101010100010110 000011110100000111011001000100000001111010100100

Round: 12 00011000010100101101010100010110 00010110000110001000101110111110 000111110100000110011001100110000010100010110101

Round: 13 00010110000110001000101110111110 10110100010100110000011010001101 000111110000100110001001001000110110101010010001

Round: 14 10110100010100110000011010001101 10100100100011100010100000010100 000110110010100010001101001100110010000100010011

Round: 15 10100100100011100010100000010100 00001100110011110110100100101000 000110010010110010001100101001110000000100000110

Round: 16 00001100110011110110100100101000 11111011011011101010010110011100 010100010010110010001100000101110000001111000010

Round: Swap 11111011011011101010010110011100 00001100110011110110100100101000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 2030303030303030

After Initial Permutation: 00FE000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100101110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100101110011110110001 11000010011010100001100001001010 010100001010110010100100010101001010000101000001

Round: 3 11000010011010100001100001001010 10100011100000101100010110101101 110100001010110000100110011000101010010001001100

Round: 4 10100011100000101100010110101101 01011001101001100000111100100001 111000001010011000100110011010001011010110001010

Round: 5 01011001101001100000111100100001 01110110111100100010001101001001 111000001001011000100110001011000101010000101011

Round: 6 01110110111100100010001101001001 10011010000101111111101010110100 111000001001001001110010010011100101100001100010

Round: 7 10011010000101111111101010110100 01011101000000110011000100100001 101001001101001001110010100001001100100101111000

Round: 8 01011101000000110011000100100001 10110010000101110011001111100101 101001100101001101010010100000011001111001010000

Round: 9 10110010000101110011001111100101 00101101111000111111100010000111 001001100101001101010011110010010001001001011000

Round: 10 00101101111000111111100010000111 00001101100001010110100011101011 001011110101000101010001100100011101001000101100

Round: 11 00001101100001010110100011101011 11001001101000011110100010100000 000011110100000111011001000100000001111010100100

Round: 12 11001001101000011110100010100000 00100000100001111001101010101000 000111110100000110011001100110000010100010110101

Round: 13 00100000100001111001101010101000 00011001010111000000001110101011 000111110000100110001001001000110110101010010001

Round: 14 00011001010111000000001110101011 11001111000011111110001000011101 000110110010100010001101001100110010000100010011

Round: 15 11001111000011111110001000011101 11111010100010101101011000000001 000110010010110010001100101001110000000100000110

Round: 16 11111010100010101101011000000001 01001111100010111000111110010010 010100010010110010001100000101110000001111000010

Round: Swap 01001111100010111000111110010010 11111010100010101101011000000001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131303030303030

After Initial Permutation: 00FF000300FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110010 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110010 01101010111011001000001001101000 010100001010110010100100010101001010000101000001

Round: 3 01101010111011001000001001101000 00101000010001111001000001000010 110100001010110000100110011000101010010001001100

Round: 4 00101000010001111001000001000010 01101101101011000010100010100000 111000001010011000100110011010001011010110001010

Round: 5 01101101101011000010100010100000 01100000011000011110011111010000 111000001001011000100110001011000101010000101011

Round: 6 01100000011000011110011111010000 10011110001100100110110011110011 111000001001001001110010010011100101100001100010

Round: 7 10011110001100100110110011110011 10010000111011111001001001011110 101001001101001001110010100001001100100101111000

Round: 8 10010000111011111001001001011110 10100000001011100110100011110010 101001100101001101010010100000011001111001010000

Round: 9 10100000001011100110100011110010 01100000101101001001000011110001 001001100101001101010011110010010001001001011000

Round: 10 01100000101101001001000011110001 00010010000100100101011111100010 001011110101000101010001100100011101001000101100

Round: 11 00010010000100100101011111100010 01100000110010101111110001010000 000011110100000111011001000100000001111010100100

Round: 12 01100000110010101111110001010000 11000111000000000011010100011011 000111110100000110011001100110000010100010110101

Round: 13 11000111000000000011010100011011 00100000000101110000010111001110 000111110000100110001001001000110110101010010001

Round: 14 00100000000101110000010111001110 01100001011011011010000011110011 000110110010100010001101001100110010000100010011

Round: 15 01100001011011011010000011110011 00110101001111011111101110101111 000110010010110010001100101001110000000100000110

Round: 16 00110101001111011111101110101111 11001111100101000110000000010011 010100010010110010001100000101110000001111000010

Round: Swap 11001111100101000110000000010011 00110101001111011111101110101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3020303030303030

After Initial Permutation: 00FD000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100011110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100011110011110110001 11100010011011100001100000001010 010100001010110010100100010101001010000101000001

Round: 3 11100010011011100001100000001010 00100011010100010100001110101111 110100001010110000100110011000101010010001001100

Round: 4 00100011010100010100001110101111 10000101000011000100010001000011 111000001010011000100110011010001011010110001010

Round: 5 10000101000011000100010001000011 00011100010010110011000000011011 111000001001011000100110001011000101010000101011

Round: 6 00011100010010110011000000011011 01000101000101101000110100001101 111000001001001001110010010011100101100001100010

Round: 7 01000101000101101000110100001101 11110001010011010111110111000011 101001001101001001110010100001001100100101111000

Round: 8 11110001010011010111110111000011 00111111101001011100011100010110 101001100101001101010010100000011001111001010000

Round: 9 00111111101001011100011100010110 01101100100111110111110000000111 001001100101001101010011110010010001001001011000

Round: 10 01101100100111110111110000000111 00010001000110101000101111000011 001011110101000101010001100100011101001000101100

Round: 11 00010001000110101000101111000011 11000111010100001010001010011100 000011110100000111011001000100000001111010100100

Round: 12 11000111010100001010001010011100 11111110101110001101001111000110 000111110100000110011001100110000010100010110101

Round: 13 11111110101110001101001111000110 01101111011011010011001010110111 000111110000100110001001001000110110101010010001

Round: 14 01101111011011010011001010110111 11001111000001101000001010111001 000110110010100010001101001100110010000100010011

Round: 15 11001111000001101000001010111001 10100000111011001100111101110101 000110010010110010001100101001110000000100000110

Round: 16 10100000111011001100111101110101 11001010011100110010011000011101 010100010010110010001100000101110000001111000010

Round: Swap 11001010011100110010011000011101 10100000111011001100111101110101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030313131313131

After Initial Permutation: 00FF00FC00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001101 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001101 01111010010011000000010001100010 010100001010110010100100010101001010000101000001

Round: 3 01111010010011000000010001100010 01110101100111011011011001110000 110100001010110000100110011000101010010001001100

Round: 4 01110101100111011011011001110000 01000100000100001101011110011000 111000001010011000100110011010001011010110001010

Round: 5 01000100000100001101011110011000 10001111000110100110000001010011 111000001001011000100110001011000101010000101011

Round: 6 10001111000110100110000001010011 10001000111011010101110000111100 111000001001001001110010010011100101100001100010

Round: 7 10001000111011010101110000111100 10001110000010110011101110001001 101001001101001001110010100001001100100101111000

Round: 8 10001110000010110011101110001001 10000111100110101110000101011011 101001100101001101010010100000011001111001010000

Round: 9 10000111100110101110000101011011 10000011100110100001000110111101 001001100101001101010011110010010001001001011000

Round: 10 10000011100110100001000110111101 10101110101000011110100011010010 001011110101000101010001100100011101001000101100

Round: 11 10101110101000011110100011010010 11000000000110101100100001111101 000011110100000111011001000100000001111010100100

Round: 12 11000000000110101100100001111101 00011110011010010101010001001001 000111110100000110011001100110000010100010110101

Round: 13 00011110011010010101010001001001 10011110111110000010011110011100 000111110000100110001001001000110110101010010001

Round: 14 10011110111110000010011110011100 01100100101101011101000011111100 000110110010100010001101001100110010000100010011

Round: 15 01100100101101011101000011111100 10010100000000011111000110010111 000110010010110010001100101001110000000100000110

Round: 16 10010100000000011111000110010111 10101010011100011011010011111100 010100010010110010001100000101110000001111000010

Round: Swap 10101010011100011011010011111100 10010100000000011111000110010111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313030303030

After Initial Permutation: 00FF000700FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110110 01101010111011101000001001001000 010100001010110010100100010101001010000101000001

Round: 3 01101010111011101000001001001000 10101010010001111001010000000110 110100001010110000100110011000101010010001001100

Round: 4 10101010010001111001010000000110 00100101100101101010011010001010 111000001010011000100110011010001011010110001010

Round: 5 00100101100101101010011010001010 00110100000100000110110111000001 111000001001011000100110001011000101010000101011

Round: 6 00110100000100000110110111000001 00000100111111010110100010110000 111000001001001001110010010011100101100001100010

Round: 7 00000100111111010110100010110000 00010011001010011100010101100101 101001001101001001110010100001001100100101111000

Round: 8 00010011001010011100010101100101 10100111111000010001101111100000 101001100101001101010010100000011001111001010000

Round: 9 10100111111000010001101111100000 00110011001011001111011101111111 001001100101001101010011110010010001001001011000

Round: 10 00110011001011001111011101111111 10011011110000000001001001101011 001011110101000101010001100100011101001000101100

Round: 11 10011011110000000001001001101011 10011001100101010011000001001100 000011110100000111011001000100000001111010100100

Round: 12 10011001100101010011000001001100 11000011111100101100000011010111 000111110100000110011001100110000010100010110101

Round: 13 11000011111100101100000011010111 00010100011111011000010101010011 000111110000100110001001001000110110101010010001

Round: 14 00010100011111011000010101010011 11001011001000100111111110010110 000110110010100010001101001100110010000100010011

Round: 15 11001011001000100111111110010110 00111001111101101010010111011110 000110010010110010001100101001110000000100000110

Round: 16 00111001111101101010010111011110 01100111011111111011100010000010 010100010010110010001100000101110000001111000010

Round: Swap 01100111011111111011100010000010 00111001111101101010010111011110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030203030303030

After Initial Permutation: 00FB000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101101111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101101111110011110110001 11100010001011100001100001001010 010100001010110010100100010101001010000101000001

Round: 3 11100010001011100001100001001010 00100011010001100100011010101111 110100001010110000100110011000101010010001001100

Round: 4 00100011010001100100011010101111 00010110010010000111000100000110 111000001010011000100110011010001011010110001010

Round: 5 00010110010010000111000100000110 01110011100011000101100001000010 111000001001011000100110001011000101010000101011

Round: 6 01110011100011000101100001000010 10100001000011011001101101001100 111000001001001001110010010011100101100001100010

Round: 7 10100001000011011001101101001100 00000011110000101111101100011011 101001001101001001110010100001001100100101111000

Round: 8 00000011110000101111101100011011 11010001101001000000010010011001 101001100101001101010010100000011001111001010000

Round: 9 11010001101001000000010010011001 01111110001010001111110001000100 001001100101001101010011110010010001001001011000

Round: 10 01111110001010001111110001000100 00010001010110001101010110101111 001011110101000101010001100100011101001000101100

Round: 11 00010001010110001101010110101111 01001011101000100010001000010011 000011110100000111011001000100000001111010100100

Round: 12 01001011101000100010001000010011 00000111101100001110111101000101 000111110100000110011001100110000010100010110101

Round: 13 00000111101100001110111101000101 01100100100011000111010011110010 000111110000100110001001001000110110101010010001

Round: 14 01100100100011000111010011110010 00010010010101010000100001010010 000110110010100010001101001100110010000100010011

Round: 15 00010010010101010000100001010010 00011010000110111101110001100001 000110010010110010001100101001110000000100000110

Round: 16 00011010000110111101110001100001 11001011100110001111001011110010 010100010010110010001100000101110000001111000010

Round: Swap 11001011100110001111001011110010 00011010000110111101110001100001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303031

After Initial Permutation: 00FF008000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100110001 01110010010111100000110001000011 010100001010110010100100010101001010000101000001

Round: 3 01110010010111100000110001000011 00101100001100001011101111010011 110100001010110000100110011000101010010001001100

Round: 4 00101100001100001011101111010011 10001001011010000111101101110001 111000001010011000100110011010001011010110001010

Round: 5 10001001011010000111101101110001 00111100110111110110110010111111 111000001001011000100110001011000101010000101011

Round: 6 00111100110111110110110010111111 00010100110011010001101010000000 111000001001001001110010010011100101100001100010

Round: 7 00010100110011010001101010000000 01110001011110010011010011000101 101001001101001001110010100001001100100101111000

Round: 8 01110001011110010011010011000101 01110100101111001111111011011100 101001100101001101010010100000011001111001010000

Round: 9 01110100101111001111111011011100 10100001001010101111110000101100 001001100101001101010011110010010001001001011000

Round: 10 10100001001010101111110000101100 01111010010100011110011110001100 001011110101000101010001100100011101001000101100

Round: 11 01111010010100011110011110001100 11110011111001111011011010011011 000011110100000111011001000100000001111010100100

Round: 12 11110011111001111011011010011011 11101001111100111111010010001001 000111110100000110011001100110000010100010110101

Round: 13 11101001111100111111010010001001 01000111011010011010000111011111 000111110000100110001001001000110110101010010001

Round: 14 01000111011010011010000111011111 00110001000001111100011101001110 000110110010100010001101001100110010000100010011

Round: 15 00110001000001111100011101001110 01100011110011000110011010000110 000110010010110010001100101001110000000100000110

Round: 16 01100011110011000110011010000110 00100001000100100000101100001100 010100010010110010001100000101110000001111000010

Round: Swap 00100001000100100000101100001100 01100011110011000110011010000110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313130303030

After Initial Permutation: 00FF000F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110111110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110111110 01100010111011001000011001101001 010100001010110010100100010101001010000101000001

Round: 3 01100010111011001000011001101001 01100000111011010101101001000100 110100001010110000100110011000101010010001001100

Round: 4 01100000111011010101101001000100 00110000011010101010011010100011 111000001010011000100110011010001011010110001010

Round: 5 00110000011010101010011010100011 00111100111010001010110011000110 111000001001011000100110001011000101010000101011

Round: 6 00111100111010001010110011000110 10000000100110010101001111110000 111000001001001001110010010011100101100001100010

Round: 7 10000000100110010101001111110000 11011110001111011101101001001111 101001001101001001110010100001001100100101111000

Round: 8 11011110001111011101101001001111 11110101011110010111010110001101 101001100101001101010010100000011001111001010000

Round: 9 11110101011110010111010110001101 00000111111100100111000011110011 001001100101001101010011110010010001001001011000

Round: 10 00000111111100100111000011110011 00001010110011100000100110101111 001011110101000101010001100100011101001000101100

Round: 11 00001010110011100000100110101111 10010111101110000001110100101000 000011110100000111011001000100000001111010100100

Round: 12 10010111101110000001110100101000 00001001000100111110110111001111 000111110100000110011001100110000010100010110101

Round: 13 00001001000100111110110111001111 01000001000100000010100001010000 000111110000100110001001001000110110101010010001

Round: 14 01000001000100000010100001010000 10010011101001111011110010110010 000110110010100010001101001100110010000100010011

Round: 15 10010011101001111011110010110010 00100000001000011100001100001101 000110010010110010001100101001110000000100000110

Round: 16 00100000001000011100001100001101 01100011010100100111001110000001 010100010010110010001100000101110000001111000010

Round: Swap 01100011010100100111001110000001 00100000001000011100001100001101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030302030303030

After Initial Permutation: 00F7000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101110111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101110111110011110110001 11100110001011100001100100001010 010100001010110010100100010101001010000101000001

Round: 3 11100110001011100001100100001010 01110001010100100110001010101110 110100001010110000100110011000101010010001001100

Round: 4 01110001010100100110001010101110 00011011001000001000101111101000 111000001010011000100110011010001011010110001010

Round: 5 00011011001000001000101111101000 01100001000110110001111110000011 111000001001011000100110001011000101010000101011

Round: 6 01100001000110110001111110000011 01111110010101010011110000000101 111000001001001001110010010011100101100001100010

Round: 7 01111110010101010011110000000101 10000111010000000101111111101100 101001001101001001110010100001001100100101111000

Round: 8 10000111010000000101111111101100 00110011100110100101101110011101 101001100101001101010010100000011001111001010000

Round: 9 00110011100110100101101110011101 10001000000100111010010101100010 001001100101001101010011110010010001001001011000

Round: 10 10001000000100111010010101100010 01100100011100100100111011110110 001011110101000101010001100100011101001000101100

Round: 11 01100100011100100100111011110110 11101111010101011000000101001101 000011110100000111011001000100000001111010100100

Round: 12 11101111010101011000000101001101 11010011111101000100110001101011 000111110100000110011001100110000010100010110101

Round: 13 11010011111101000100110001101011 00101010001110010010001011101000 000111110000100110001001001000110110101010010001

Round: 14 00101010001110010010001011101000 10011110000111111011001110000001 000110110010100010001101001100110010000100010011

Round: 15 10011110000111111011001110000001 00110010000011000111110001000010 000110010010110010001100101001110000000100000110

Round: 16 00110010000011000111110001000010 11001001100011101001010001110101 010100010010110010001100000101110000001111000010

Round: Swap 11001001100011101001010001110101 00110010000011000111110001000010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303031303031

After Initial Permutation: 00FF009000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100100001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100100001 01111000010011000000110001100010 010100001010110010100100010101001010000101000001

Round: 3 01111000010011000000110001100010 01100100101100011011011010000100 110100001010110000100110011000101010010001001100

Round: 4 01100100101100011011011010000100 11011100100100110110100010111001 111000001010011000100110011010001011010110001010

Round: 5 11011100100100110110100010111001 11000011010000010100100000110010 111000001001011000100110001011000101010000101011

Round: 6 11000011010000010100100000110010 00110000110110111101100001101000 111000001001001001110010010011100101100001100010

Round: 7 00110000110110111101100001101000 01011111001110001010001101100001 101001001101001001110010100001001100100101111000

Round: 8 01011111001110001010001101100001 10101111100001100000000100101100 101001100101001101010010100000011001111001010000

Round: 9 10101111100001100000000100101100 10111100001010001100111100100101 001001100101001101010011110010010001001001011000

Round: 10 10111100001010001100111100100101 00011101111110001011110000000010 001011110101000101010001100100011101001000101100

Round: 11 00011101111110001011110000000010 11111010100100110101010101011101 000011110100000111011001000100000001111010100100

Round: 12 11111010100100110101010101011101 01111100100010011110011111000000 000111110100000110011001100110000010100010110101

Round: 13 01111100100010011110011111000000 10110111101011110000011100100000 000111110000100110001001001000110110101010010001

Round: 14 10110111101011110000011100100000 10000110111001001001110001000110 000110110010100010001101001100110010000100010011

Round: 15 10000110111001001001110001000110 00000111011011011110111111110001 000110010010110010001100101001110000000100000110

Round: 16 00000111011011011110111111110001 10010000010000101100010010110101 010100010010110010001100000101110000001111000010

Round: Swap 10010000010000101100010010110101 00000111011011011110111111110001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131303030

After Initial Permutation: 00FF001F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110101110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110101110 01101000111111101000111001001001 010100001010110010100100010101001010000101000001

Round: 3 01101000111111101000111001001001 00010110010011001010111111001000 110100001010110000100110011000101010010001001100

Round: 4 00010110010011001010111111001000 00001010000001101111100000001101 111000001010011000100110011010001011010110001010

Round: 5 00001010000001101111100000001101 11111010110101101100001001101111 111000001001011000100110001011000101010000101011

Round: 6 11111010110101101100001001101111 11101000000100000111110111100101 111000001001001001110010010011100101100001100010

Round: 7 11101000000100000111110111100101 10110011101111110010010001000111 101001001101001001110010100001001100100101111000

Round: 8 10110011101111110010010001000111 01101010111101100010110011101000 101001100101001101010010100000011001111001010000

Round: 9 01101010111101100010110011101000 10000000011111011101010100110100 001001100101001101010011110010010001001001011000

Round: 10 10000000011111011101010100110100 10000111100001101100000010010111 001011110101000101010001100100011101001000101100

Round: 11 10000111100001101100000010010111 10010101111010111001111111101011 000011110100000111011001000100000001111010100100

Round: 12 10010101111010111001111111101011 10111010110100011000111001000101 000111110100000110011001100110000010100010110101

Round: 13 10111010110100011000111001000101 00000100001110100001110000111101 000111110000100110001001001000110110101010010001

Round: 14 00000100001110100001110000111101 11011110011100001101111100100101 000110110010100010001101001100110010000100010011

Round: 15 11011110011100001101111100100101 10110111001110011100011101011001 000110010010110010001100101001110000000100000110

Round: 16 10110111001110011100011101011001 10110000000101111100001101001110 010100010010110010001100000101110000001111000010

Round: Swap 10110000000101111100001101001110 10110111001110011100011101011001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303020303030

After Initial Permutation: 00EF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101000111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101000111110011110110001 11100110001011110001100101001010 010100001010110010100100010101001010000101000001

Round: 3 11100110001011110001100101001010 11010000000011100111011010101111 110100001010110000100110011000101010010001001100

Round: 4 11010000000011100111011010101111 11000110011011001011100011110010 111000001010011000100110011010001011010110001010

Round: 5 11000110011011001011100011110010 11010111010110111110111001110110 111000001001011000100110001011000101010000101011

Round: 6 11010111010110111110111001110110 01000101000111011111110010011100 111000001001001001110010010011100101100001100010

Round: 7 01000101000111011111110010011100 10111010100110100001010101000001 101001001101001001110010100001001100100101111000

Round: 8 10111010100110100001010101000001 01010101001001010011001100110111 101001100101001101010010100000011001111001010000

Round: 9 01010101001001010011001100110111 01010000001000111011100111111101 001001100101001101010011110010010001001001011000

Round: 10 01010000001000111011100111111101 11011011100101101100010000010100 001011110101000101010001100100011101001000101100

Round: 11 11011011100101101100010000010100 11010001010011000101000001000011 000011110100000111011001000100000001111010100100

Round: 12 11010001010011000101000001000011 01101101101110010001001011101000 000111110100000110011001100110000010100010110101

Round: 13 01101101101110010001001011101000 00110010100100001010111001010100 000111110000100110001001001000110110101010010001

Round: 14 00110010100100001010111001010100 10001011010000011010100101001101 000110110010100010001101001100110010000100010011

Round: 15 10001011010000011010100101001101 10101011011111010010000011011101 000110010010110010001100101001110000000100000110

Round: 16 10101011011111010010000011011101 10111100101010100001001010001010 010100010010110010001100000101110000001111000010

Round: Swap 10111100101010100001001010001010 10101011011111010010000011011101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313031313030

After Initial Permutation: 00FF003700FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110000110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110000110 01100000111111001000101001101000 010100001010110010100100010101001010000101000001

Round: 3 01100000111111001000101001101000 11001100100001101110000111101000 110100001010110000100110011000101010010001001100

Round: 4 11001100100001101110000111101000 11011000011011110010100001001110 111000001010011000100110011010001011010110001010

Round: 5 11011000011011110010100001001110 01010001000001110101110111000000 111000001001011000100110001011000101010000101011

Round: 6 01010001000001110101110111000000 10000000110000001100010010011010 111000001001001001110010010011100101100001100010

Round: 7 10000000110000001100010010011010 00010000100001010000011101101101 101001001101001001110010100001001100100101111000

Round: 8 00010000100001010000011101101101 00011110101010111100111101110111 101001100101001101010010100000011001111001010000

Round: 9 00011110101010111100111101110111 00111100110010011011110010010000 001001100101001101010011110010010001001001011000

Round: 10 00111100110010011011110010010000 11000110000010011011000100111000 001011110101000101010001100100011101001000101100

Round: 11 11000110000010011011000100111000 00011101101000100100110110110111 000011110100000111011001000100000001111010100100

Round: 12 00011101101000100100110110110111 10101001110001110010001101001001 000111110100000110011001100110000010100010110101

Round: 13 10101001110001110010001101001001 10111101000011001111110000111111 000111110000100110001001001000110110101010010001

Round: 14 10111101000011001111110000111111 11100101111001001010001100111111 000110110010100010001101001100110010000100010011

Round: 15 11100101111001001010001100111111 01001011111010111111001001101110 000110010010110010001100101001110000000100000110

Round: 16 01001011111010111111001001101110 11100111100000101000110001001000 010100010010110010001100000101110000001111000010

Round: Swap 11100111100000101000110001001000 01001011111010111111001001101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313030303030

After Initial Permutation: 00FF000700FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110110 01101010111011101000001001001000 010100001010110010100100010101001010000101000001

Round: 3 01101010111011101000001001001000 10101010010001111001010000000110 110100001010110000100110011000101010010001001100

Round: 4 10101010010001111001010000000110 00100101100101101010011010001010 111000001010011000100110011010001011010110001010

Round: 5 00100101100101101010011010001010 00110100000100000110110111000001 111000001001011000100110001011000101010000101011

Round: 6 00110100000100000110110111000001 00000100111111010110100010110000 111000001001001001110010010011100101100001100010

Round: 7 00000100111111010110100010110000 00010011001010011100010101100101 101001001101001001110010100001001100100101111000

Round: 8 00010011001010011100010101100101 10100111111000010001101111100000 101001100101001101010010100000011001111001010000

Round: 9 10100111111000010001101111100000 00110011001011001111011101111111 001001100101001101010011110010010001001001011000

Round: 10 00110011001011001111011101111111 10011011110000000001001001101011 001011110101000101010001100100011101001000101100

Round: 11 10011011110000000001001001101011 10011001100101010011000001001100 000011110100000111011001000100000001111010100100

Round: 12 10011001100101010011000001001100 11000011111100101100000011010111 000111110100000110011001100110000010100010110101

Round: 13 11000011111100101100000011010111 00010100011111011000010101010011 000111110000100110001001001000110110101010010001

Round: 14 00010100011111011000010101010011 11001011001000100111111110010110 000110110010100010001101001100110010000100010011

Round: 15 11001011001000100111111110010110 00111001111101101010010111011110 000110010010110010001100101001110000000100000110

Round: 16 00111001111101101010010111011110 01100111011111111011100010000010 010100010010110010001100000101110000001111000010

Round: Swap 01100111011111111011100010000010 00111001111101101010010111011110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030203030

After Initial Permutation: 00DF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000100100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000100100111110011110110001 01100110011011100000100101001010 010100001010110010100100010101001010000101000001

Round: 3 01100110011011100000100101001010 01100000110110111100110100000111 110100001010110000100110011000101010010001001100

Round: 4 01100000110110111100110100000111 00101011010011111001101101000111 111000001010011000100110011010001011010110001010

Round: 5 00101011010011111001101101000111 01111000111111001001111111111101 111000001001011000100110001011000101010000101011

Round: 6 01111000111111001001111111111101 10101101101001101110000110101001 111000001001001001110010010011100101100001100010

Round: 7 10101101101001101110000110101001 01010010101100101110101110100001 101001001101001001110010100001001100100101111000

Round: 8 01010010101100101110101110100001 01010011011010100010101011111111 101001100101001101010010100000011001111001010000

Round: 9 01010011011010100010101011111111 11100101000010110011011010110001 001001100101001101010011110010010001001001011000

Round: 10 11100101000010110011011010110001 11010000110001111101100011010111 001011110101000101010001100100011101001000101100

Round: 11 11010000110001111101100011010111 01000011101010010100110000111001 000011110100000111011001000100000001111010100100

Round: 12 01000011101010010100110000111001 00111110101101100110101110001000 000111110100000110011001100110000010100010110101

Round: 13 00111110101101100110101110001000 01000101001100011100001110110100 000111110000100110001001001000110110101010010001

Round: 14 01000101001100011100001110110100 10111001001010100001011011101001 000110110010100010001101001100110010000100010011

Round: 15 10111001001010100001011011101001 11000100010101100110011001010010 000110010010110010001100101001110000000100000110

Round: 16 11000100010101100110011001010010 10101111110011010011100010001010 010100010010110010001100000101110000001111000010

Round: Swap 10101111110011010011100010001010 11000100010101100110011001010010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313130303030

After Initial Permutation: 00FF000E00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110111111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110111111 01101010011011000000110001001011 010100001010110010100100010101001010000101000001

Round: 3 01101010011011000000110001001011 01100010001010111111011100111001 110100001010110000100110011000101010010001001100

Round: 4 01100010001010111111011100111001 11000100010011111000011100111110 111000001010011000100110011010001011010110001010

Round: 5 11000100010011111000011100111110 00111000001111010010001101010100 111000001001011000100110001011000101010000101011

Round: 6 00111000001111010010001101010100 11101011111011000010111100011101 111000001001001001110010010011100101100001100010

Round: 7 11101011111011000010111100011101 10000000011011111000110100111001 101001001101001001110010100001001100100101111000

Round: 8 10000000011011111000110100111001 10011001010000000000011000010011 101001100101001101010010100000011001111001010000

Round: 9 10011001010000000000011000010011 01101111100001001011011000111000 001001100101001101010011110010010001001001011000

Round: 10 01101111100001001011011000111000 00100000001000010010001101100100 001011110101000101010001100100011101001000101100

Round: 11 00100000001000010010001101100100 01100001111110110011001001001100 000011110100000111011001000100000001111010100100

Round: 12 01100001111110110011001001001100 00101100001110010000000010111000 000111110100000110011001100110000010100010110101

Round: 13 00101100001110010000000010111000 10100110100100011000011011000100 000111110000100110001001001000110110101010010001

Round: 14 10100110100100011000011011000100 10111000101000010111011111110100 000110110010100010001101001100110010000100010011

Round: 15 10111000101000010111011111110100 10111001010011011000110110100100 000110010010110010001100101001110000000100000110

Round: 16 10111001010011011000110110100100 10111101001001111100100010111010 010100010010110010001100000101110000001111000010

Round: Swap 10111101001001111100100010111010 10111001010011011000110110100100 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313030313131

After Initial Permutation: 00FF00E600FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101010111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101010111 01111010010011100000110001100010 010100001010110010100100010101001010000101000001

Round: 3 01111010010011100000110001100010 01100100111110011010011011100010 110100001010110000100110011000101010010001001100

Round: 4 01100100111110011010011011100010 01101111101001100110010101111000 111000001010011000100110011010001011010110001010

Round: 5 01101111101001100110010101111000 11101001101001111100010010011101 111000001001011000100110001011000101010000101011

Round: 6 11101001101001111100010010011101 01111100111100101110001111110111 111000001001001001110010010011100101100001100010

Round: 7 01111100111100101110001111110111 11010011101110001101000111100010 101001001101001001110010100001001100100101111000

Round: 8 11010011101110001101000111100010 11001110001100001001010000011000 101001100101001101010010100000011001111001010000

Round: 9 11001110001100001001010000011000 01010011100111011101001111001000 001001100101001101010011110010010001001001011000

Round: 10 01010011100111011101001111001000 00111101011100011111110101100001 001011110101000101010001100100011101001000101100

Round: 11 00111101011100011111110101100001 01010001010010000101110111011100 000011110100000111011001000100000001111010100100

Round: 12 01010001010010000101110111011100 00111001100110100010000111011111 000111110100000110011001100110000010100010110101

Round: 13 00111001100110100010000111011111 01111100000100011011000101101101 000111110000100110001001001000110110101010010001

Round: 14 01111100000100011011000101101101 11010111100100011111000000011111 000110110010100010001101001100110010000100010011

Round: 15 11010111100100011111000000011111 00111111000010110011110010111011 000110010010110010001100101001110000000100000110

Round: 16 00111111000010110011110010111011 11011101001010111000001111000101 010100010010110010001100000101110000001111000010

Round: Swap 11011101001010111000001111000101 00111111000010110011110010111011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313130303030

After Initial Permutation: 00FF000F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110111110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110111110 01100010111011001000011001101001 010100001010110010100100010101001010000101000001

Round: 3 01100010111011001000011001101001 01100000111011010101101001000100 110100001010110000100110011000101010010001001100

Round: 4 01100000111011010101101001000100 00110000011010101010011010100011 111000001010011000100110011010001011010110001010

Round: 5 00110000011010101010011010100011 00111100111010001010110011000110 111000001001011000100110001011000101010000101011

Round: 6 00111100111010001010110011000110 10000000100110010101001111110000 111000001001001001110010010011100101100001100010

Round: 7 10000000100110010101001111110000 11011110001111011101101001001111 101001001101001001110010100001001100100101111000

Round: 8 11011110001111011101101001001111 11110101011110010111010110001101 101001100101001101010010100000011001111001010000

Round: 9 11110101011110010111010110001101 00000111111100100111000011110011 001001100101001101010011110010010001001001011000

Round: 10 00000111111100100111000011110011 00001010110011100000100110101111 001011110101000101010001100100011101001000101100

Round: 11 00001010110011100000100110101111 10010111101110000001110100101000 000011110100000111011001000100000001111010100100

Round: 12 10010111101110000001110100101000 00001001000100111110110111001111 000111110100000110011001100110000010100010110101

Round: 13 00001001000100111110110111001111 01000001000100000010100001010000 000111110000100110001001001000110110101010010001

Round: 14 01000001000100000010100001010000 10010011101001111011110010110010 000110110010100010001101001100110010000100010011

Round: 15 10010011101001111011110010110010 00100000001000011100001100001101 000110010010110010001100101001110000000100000110

Round: 16 00100000001000011100001100001101 01100011010100100111001110000001 010100010010110010001100000101110000001111000010

Round: Swap 01100011010100100111001110000001 00100000001000011100001100001101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030302030

After Initial Permutation: 00BF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000111100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000111100111110011110110001 01100110011011110000100001001110 010100001010110010100100010101001010000101000001

Round: 3 01100110011011110000100001001110 11011011111010011101010100101111 110100001010110000100110011000101010010001001100

Round: 4 11011011111010011101010100101111 10100000111100001001101101110100 111000001010011000100110011010001011010110001010

Round: 5 10100000111100001001101101110100 00101010110011101100001000110011 111000001001011000100110001011000101010000101011

Round: 6 00101010110011101100001000110011 10001100111101001101100110101111 111000001001001001110010010011100101100001100010

Round: 7 10001100111101001101100110101111 01011000100011010110111111011101 101001001101001001110010100001001100100101111000

Round: 8 01011000100011010110111111011101 11110111110100000111110110000010 101001100101001101010010100000011001111001010000

Round: 9 11110111110100000111110110000010 00100100000100010011000111011010 001001100101001101010011110010010001001001011000

Round: 10 00100100000100010011000111011010 10110000111011000110010010111000 001011110101000101010001100100011101001000101100

Round: 11 10110000111011000110010010111000 10010100100101101100010100111011 000011110100000111011001000100000001111010100100

Round: 12 10010100100101101100010100111011 01100011101000110000001100111011 000111110100000110011001100110000010100010110101

Round: 13 01100011101000110000001100111011 00010011011111011110110010000001 000111110000100110001001001000110110101010010001

Round: 14 00010011011111011110110010000001 00101001011001101011000111010110 000110110010100010001101001100110010000100010011

Round: 15 00101001011001101011000111010110 11111011111101010001101101110011 000110010010110010001100101001110000000100000110

Round: 16 11111011111101010001101101110011 01010100110111011001010001111000 010100010010110010001100000101110000001111000010

Round: Swap 01010100110111011001010001111000 11111011111101010001101101110011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030313131313030

After Initial Permutation: 00FF003C00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110001101 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110001101 01101000011011000000010001101010 010100001010110010100100010101001010000101000001

Round: 3 01101000011011000000010001101010 00110001000001111111100110100001 110100001010110000100110011000101010010001001100

Round: 4 00110001000001111111100110100001 00101101001100111010011000001000 111000001010011000100110011010001011010110001010

Round: 5 00101101001100111010011000001000 10010101001101100100011101001100 111000001001011000100110001011000101010000101011

Round: 6 10010101001101100100011101001100 10001010011010100001100001100101 111000001001001001110010010011100101100001100010

Round: 7 10001010011010100001100001100101 11001011000101101110011011111110 101001001101001001110010100001001100100101111000

Round: 8 11001011000101101110011011111110 11000100100110111010101000110010 101001100101001101010010100000011001111001010000

Round: 9 11000100100110111010101000110010 01001010100110001010000110000111 001001100101001101010011110010010001001001011000

Round: 10 01001010100110001010000110000111 11111001111111001000001011110100 001011110101000101010001100100011101001000101100

Round: 11 11111001111111001000001011110100 00111100111110111110110101110110 000011110100000111011001000100000001111010100100

Round: 12 00111100111110111110110101110110 01001000010101010001000110111101 000111110100000110011001100110000010100010110101

Round: 13 01001000010101010001000110111101 10000001001111011101111100111001 000111110000100110001001001000110110101010010001

Round: 14 10000001001111011101111100111001 01101011001101111100111111000110 000110110010100010001101001100110010000100010011

Round: 15 01101011001101111100111111000110 00011010010101101100010001011000 000110010010110010001100101001110000000100000110

Round: 16 00011010010101101100010001011000 10101110111111001010100111100100 010100010010110010001100000101110000001111000010

Round: Swap 10101110111111001010100111100100 00011010010101101100010001011000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313031313131

After Initial Permutation: 00FF00F600FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101000111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101000111 01110000010111100000010001100011 010100001010110010100100010101001010000101000001

Round: 3 01110000010111100000010001100011 00111101000101001111111100111100 110100001010110000100110011000101010010001001100

Round: 4 00111101000101001111111100111100 11110010100111001110010111010100 111000001010011000100110011010001011010110001010

Round: 5 11110010100111001110010111010100 10101110100111111011101111101100 111000001001011000100110001011000101010000101011

Round: 6 10101110100111111011101111101100 10000010100011011100100111111110 111000001001001001110010010011100101100001100010

Round: 7 10000010100011011100100111111110 11010011010110111011010010011001 101001001101001001110010100001001100100101111000

Round: 8 11010011010110111011010010011001 10100101101000010010011001100110 101001100101001101010010100000011001111001010000

Round: 9 10100101101000010010011001100110 11110100011111011100001100111110 001001100101001101010011110010010001001001011000

Round: 10 11110100011111011100001100111110 01111010010111011100001010000010 001011110101000101010001100100011101001000101100

Round: 11 01111010010111011100001010000010 10100010100101101001110000001000 000011110100000111011001000100000001111010100100

Round: 12 10100010100101101001110000001000 10101000000101000010010110101011 000111110100000110011001100110000010100010110101

Round: 13 10101000000101000010010110101011 00010011010001110001100010101000 000111110000100110001001001000110110101010010001

Round: 14 00010011010001110001100010101000 11010101101000101000100111000100 000110110010100010001101001100110010000100010011

Round: 15 11010101101000101000100111000100 00010001001000100010100100001101 000110010010110010001100101001110000000100000110

Round: 16 00010001001000100010100100001101 11000001100100110100011101111011 010100010010110010001100000101110000001111000010

Round: Swap 11000001100100110100011101111011 00010001001000100010100100001101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313030

After Initial Permutation: 00FF003F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110001110 01101000111011101000111001001000 010100001010110010100100010101001010000101000001

Round: 3 01101000111011101000111001001000 10011010010011111011010010101110 110100001010110000100110011000101010010001001100

Round: 4 10011010010011111011010010101110 00010000010000001101011010010110 111000001010011000100110011010001011010110001010

Round: 5 00010000010000001101011010010110 11110100101010111110001010101111 111000001001011000100110001011000101010000101011

Round: 6 11110100101010111110001010101111 00100001010101101111001010110000 111000001001001001110010010011100101100001100010

Round: 7 00100001010101101111001010110000 00000110101100111100101101011001 101001001101001001110010100001001100100101111000

Round: 8 00000110101100111100101101011001 11001101110011000100100100111101 101001100101001101010010100000011001111001010000

Round: 9 11001101110011000100100100111101 11010110010011110011010100000110 001001100101001101010011110010010001001001011000

Round: 10 11010110010011110011010100000110 00001000001110110110101000100000 001011110101000101010001100100011101001000101100

Round: 11 00001000001110110110101000100000 10100110010011111101000001111010 000011110100000111011001000100000001111010100100

Round: 12 10100110010011111101000001111010 10010001010101111010010110001101 000111110100000110011001100110000010100010110101

Round: 13 10010001010101111010010110001101 11111000010111001001111101001101 000111110000100110001001001000110110101010010001

Round: 14 11111000010111001001111101001101 00010001101100001110001100100000 000110110010100010001101001100110010000100010011

Round: 15 00010001101100001110001100100000 00101110111101000100111000101111 000110010010110010001100101001110000000100000110

Round: 16 00101110111101000100111000101111 11101100101110000110001111011110 010100010010110010001100000101110000001111000010

Round: Swap 11101100101110000110001111011110 00101110111101000100111000101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303020

After Initial Permutation: 007F000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000001100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000001100111110011110110001 01100010011001110100100001001110 010100001010110010100100010101001010000101000001

Round: 3 01100010011001110100100001001110 00011010001001001101010001101111 110100001010110000100110011000101010010001001100

Round: 4 00011010001001001101010001101111 00100000010111011010010010011001 111000001010011000100110011010001011010110001010

Round: 5 00100000010111011010010010011001 01111010010011001000010110110111 111000001001011000100110001011000101010000101011

Round: 6 01111010010011001000010110110111 11001001111001111000111100001110 111000001001001001110010010011100101100001100010

Round: 7 11001001111001111000111100001110 00100011100001110010001010011001 101001001101001001110010100001001100100101111000

Round: 8 00100011100001110010001010011001 10000011011010010011001100010000 101001100101001101010010100000011001111001010000

Round: 9 10000011011010010011001100010000 10000111001111000001101101010011 001001100101001101010011110010010001001001011000

Round: 10 10000111001111000001101101010011 10100011001111100101101111001100 001011110101000101010001100100011101001000101100

Round: 11 10100011001111100101101111001100 10110011100101110001100001110001 000011110100000111011001000100000001111010100100

Round: 12 10110011100101110001100001110001 00101001011011001101111100101010 000111110100000110011001100110000010100010110101

Round: 13 00101001011011001101111100101010 01101011100111101011010001000000 000111110000100110001001001000110110101010010001

Round: 14 01101011100111101011010001000000 11101001000001001110010101000111 000110110010100010001101001100110010000100010011

Round: 15 11101001000001001110010101000111 10110101110001011101000100011000 000110010010110010001100101001110000000100000110

Round: 16 10110101110001011101000100011000 01010111000101000101000111101011 010100010010110010001100000101110000001111000010

Round: Swap 01010111000101000101000111101011 10110101110001011101000100011000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313131313131

After Initial Permutation: 00FF00FE00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001111 01110010010011000000010001000010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011000000010001000010 00110101000101011011000001100011 110100001010110000100110011000101010010001001100

Round: 4 00110101000101011011000001100011 01011010010010101010101111001101 111000001010011000100110011010001011010110001010

Round: 5 01011010010010101010101111001101 01001110000111110000101001011111 111000001001011000100110001011000101010000101011

Round: 6 01001110000111110000101001011111 11100101111010101100110110101001 111000001001001001110010010011100101100001100010

Round: 7 11100101111010101100110110101001 00010100111100011001111011000011 101001001101001001110010100001001100100101111000

Round: 8 00010100111100011001111011000011 00111101110110001010101011000001 101001100101001101010010100000011001111001010000

Round: 9 00111101110110001010101011000001 01100100000011001000100101000000 001001100101001101010011110010010001001001011000

Round: 10 01100100000011001000100101000000 01110011110100100000101111111001 001011110101000101010001100100011101001000101100

Round: 11 01110011110100100000101111111001 01101110010011101000110111101111 000011110100000111011001000100000001111010100100

Round: 12 01101110010011101000110111101111 00011010100010001001110010111101 000111110100000110011001100110000010100010110101

Round: 13 00011010100010001001110010111101 11000001100011000010101110110011 000111110000100110001001001000110110101010010001

Round: 14 11000001100011000010101110110011 01010000111101101101100110111100 000110110010100010001101001100110010000100010011

Round: 15 01010000111101101101100110111100 00111110011111000000100110101101 000110010010110010001100101001110000000100000110

Round: 16 00111110011111000000100110101101 11010010000000101011001110011010 010100010010110010001100000101110000001111000010

Round: Swap 11010010000000101011001110011010 00111110011111000000100110101101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131303131313131

After Initial Permutation: 00FF00FB00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001010 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001010 01110010110011001000011001100000 010100001010110010100100010101001010000101000001

Round: 3 01110010110011001000011001100000 01101000011101001101110110000111 110100001010110000100110011000101010010001001100

Round: 4 01101000011101001101110110000111 11111101001110010010011011101101 111000001010011000100110011010001011010110001010

Round: 5 11111101001110010010011011101101 00011011011100010111110011010111 111000001001011000100110001011000101010000101011

Round: 6 00011011011100010111110011010111 01110101001100111100101011100111 111000001001001001110010010011100101100001100010

Round: 7 01110101001100111100101011100111 00110110001001001011000011110010 101001001101001001110010100001001100100101111000

Round: 8 00110110001001001011000011110010 00011001011111010010100010110000 101001100101001101010010100000011001111001010000

Round: 9 00011001011111010010100010110000 01101111111111110011111000011100 001001100101001101010011110010010001001001011000

Round: 10 01101111111111110011111000011100 00111010011111110010000101101111 001011110101000101010001100100011101001000101100

Round: 11 00111010011111110010000101101111 00111111000000001100010000000001 000011110100000111011001000100000001111010100100

Round: 12 00111111000000001100010000000001 11111111000000111110000010101111 000111110100000110011001100110000010100010110101

Round: 13 11111111000000111110000010101111 00111110011101011110111101011110 000111110000100110001001001000110110101010010001

Round: 14 00111110011101011110111101011110 11100001000101111110110000010011 000110110010100010001101001100110010000100010011

Round: 15 11100001000101111110110000010011 10011010100011111011100110011111 000110010010110010001100101001110000000100000110

Round: 16 10011010100011111011100110011111 01010010011101011001111100111110 010100010010110010001100000101110000001111000010

Round: Swap 01010010011101011001111100111110 10011010100011111011100110011111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303030

After Initial Permutation: 00FF000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110110001 01100010011011100000100001001010 010100001010110010100100010101001010000101000001

Round: 3 01100010011011100000100001001010 00110010111000111100110100001111 110100001010110000100110011000101010010001001100

Round: 4 00110010111000111100110100001111 10100101000111001000011101000001 111000001010011000100110011010001011010110001010

Round: 5 10100101000111001000011101000001 10001111011010101000011101010101 111000001001011000100110001011000101010000101011

Round: 6 10001111011010101000011101010101 11001110110101110011010111001000 111000001001001001110010010011100101100001100010

Round: 7 11001110110101110011010111001000 10011110111101100101000001111111 101001001101001001110010100001001100100101111000

Round: 8 10011110111101100101000001111111 11100111011110110010110011110011 101001100101001101010010100000011001111001010000

Round: 9 11100111011110110010110011110011 11000111111011010011101011101000 001001100101001101010011110010010001001001011000

Round: 10 11000111111011010011101011101000 00000000000010001111111000010011 001011110101000101010001100100011101001000101100

Round: 11 00000000000010001111111000010011 11110110011001101011101111111100 000011110100000111011001000100000001111010100100

Round: 12 11110110011001101011101111111100 00001100100001101101011011000100 000111110100000110011001100110000010100010110101

Round: 13 00001100100001101101011011000100 10000100000100111100111010111111 000111110000100110001001001000110110101010010001

Round: 14 10000100000100111100111010111111 11010010111001010001000110100110 000110110010100010001101001100110010000100010011

Round: 15 11010010111001010001000110100110 00100100010111011110001000101110 000110010010110010001100101001110000000100000110

Round: 16 00100100010111011110001000101110 01010111101001110001101001001000 010100010010110010001100000101110000001111000010

Round: Swap 01010111101001110001101001001000 00100100010111011110001000101110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 2030303030303030

After Initial Permutation: 00FE000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100101110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100101110011110110001 11000010011010100001100001001010 010100001010110010100100010101001010000101000001

Round: 3 11000010011010100001100001001010 10100011100000101100010110101101 110100001010110000100110011000101010010001001100

Round: 4 10100011100000101100010110101101 01011001101001100000111100100001 111000001010011000100110011010001011010110001010

Round: 5 01011001101001100000111100100001 01110110111100100010001101001001 111000001001011000100110001011000101010000101011

Round: 6 01110110111100100010001101001001 10011010000101111111101010110100 111000001001001001110010010011100101100001100010

Round: 7 10011010000101111111101010110100 01011101000000110011000100100001 101001001101001001110010100001001100100101111000

Round: 8 01011101000000110011000100100001 10110010000101110011001111100101 101001100101001101010010100000011001111001010000

Round: 9 10110010000101110011001111100101 00101101111000111111100010000111 001001100101001101010011110010010001001001011000

Round: 10 00101101111000111111100010000111 00001101100001010110100011101011 001011110101000101010001100100011101001000101100

Round: 11 00001101100001010110100011101011 11001001101000011110100010100000 000011110100000111011001000100000001111010100100

Round: 12 11001001101000011110100010100000 00100000100001111001101010101000 000111110100000110011001100110000010100010110101

Round: 13 00100000100001111001101010101000 00011001010111000000001110101011 000111110000100110001001001000110110101010010001

Round: 14 00011001010111000000001110101011 11001111000011111110001000011101 000110110010100010001101001100110010000100010011

Round: 15 11001111000011111110001000011101 11111010100010101101011000000001 000110010010110010001100101001110000000100000110

Round: 16 11111010100010101101011000000001 01001111100010111000111110010010 010100010010110010001100000101110000001111000010

Round: Swap 01001111100010111000111110010010 11111010100010101101011000000001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030313131313131

After Initial Permutation: 00FF00FC00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001101 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001101 01111010010011000000010001100010 010100001010110010100100010101001010000101000001

Round: 3 01111010010011000000010001100010 01110101100111011011011001110000 110100001010110000100110011000101010010001001100

Round: 4 01110101100111011011011001110000 01000100000100001101011110011000 111000001010011000100110011010001011010110001010

Round: 5 01000100000100001101011110011000 10001111000110100110000001010011 111000001001011000100110001011000101010000101011

Round: 6 10001111000110100110000001010011 10001000111011010101110000111100 111000001001001001110010010011100101100001100010

Round: 7 10001000111011010101110000111100 10001110000010110011101110001001 101001001101001001110010100001001100100101111000

Round: 8 10001110000010110011101110001001 10000111100110101110000101011011 101001100101001101010010100000011001111001010000

Round: 9 10000111100110101110000101011011 10000011100110100001000110111101 001001100101001101010011110010010001001001011000

Round: 10 10000011100110100001000110111101 10101110101000011110100011010010 001011110101000101010001100100011101001000101100

Round: 11 10101110101000011110100011010010 11000000000110101100100001111101 000011110100000111011001000100000001111010100100

Round: 12 11000000000110101100100001111101 00011110011010010101010001001001 000111110100000110011001100110000010100010110101

Round: 13 00011110011010010101010001001001 10011110111110000010011110011100 000111110000100110001001001000110110101010010001

Round: 14 10011110111110000010011110011100 01100100101101011101000011111100 000110110010100010001101001100110010000100010011

Round: 15 01100100101101011101000011111100 10010100000000011111000110010111 000110010010110010001100101001110000000100000110

Round: 16 10010100000000011111000110010111 10101010011100011011010011111100 010100010010110010001100000101110000001111000010

Round: Swap 10101010011100011011010011111100 10010100000000011111000110010111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313030

After Initial Permutation: 00FF003F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011110001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011110001110 01101000111011101000111001001000 010100001010110010100100010101001010000101000001

Round: 3 01101000111011101000111001001000 10011010010011111011010010101110 110100001010110000100110011000101010010001001100

Round: 4 10011010010011111011010010101110 00010000010000001101011010010110 111000001010011000100110011010001011010110001010

Round: 5 00010000010000001101011010010110 11110100101010111110001010101111 111000001001011000100110001011000101010000101011

Round: 6 11110100101010111110001010101111 00100001010101101111001010110000 111000001001001001110010010011100101100001100010

Round: 7 00100001010101101111001010110000 00000110101100111100101101011001 101001001101001001110010100001001100100101111000

Round: 8 00000110101100111100101101011001 11001101110011000100100100111101 101001100101001101010010100000011001111001010000

Round: 9 11001101110011000100100100111101 11010110010011110011010100000110 001001100101001101010011110010010001001001011000

Round: 10 11010110010011110011010100000110 00001000001110110110101000100000 001011110101000101010001100100011101001000101100

Round: 11 00001000001110110110101000100000 10100110010011111101000001111010 000011110100000111011001000100000001111010100100

Round: 12 10100110010011111101000001111010 10010001010101111010010110001101 000111110100000110011001100110000010100010110101

Round: 13 10010001010101111010010110001101 11111000010111001001111101001101 000111110000100110001001001000110110101010010001

Round: 14 11111000010111001001111101001101 00010001101100001110001100100000 000110110010100010001101001100110010000100010011

Round: 15 00010001101100001110001100100000 00101110111101000100111000101111 000110010010110010001100101001110000000100000110

Round: 16 00101110111101000100111000101111 11101100101110000110001111011110 010100010010110010001100000101110000001111000010

Round: Swap 11101100101110000110001111011110 00101110111101000100111000101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3020303030303030

After Initial Permutation: 00FD000000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100011110011110110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100011110011110110001 11100010011011100001100000001010 010100001010110010100100010101001010000101000001

Round: 3 11100010011011100001100000001010 00100011010100010100001110101111 110100001010110000100110011000101010010001001100

Round: 4 00100011010100010100001110101111 10000101000011000100010001000011 111000001010011000100110011010001011010110001010

Round: 5 10000101000011000100010001000011 00011100010010110011000000011011 111000001001011000100110001011000101010000101011

Round: 6 00011100010010110011000000011011 01000101000101101000110100001101 111000001001001001110010010011100101100001100010

Round: 7 01000101000101101000110100001101 11110001010011010111110111000011 101001001101001001110010100001001100100101111000

Round: 8 11110001010011010111110111000011 00111111101001011100011100010110 101001100101001101010010100000011001111001010000

Round: 9 00111111101001011100011100010110 01101100100111110111110000000111 001001100101001101010011110010010001001001011000

Round: 10 01101100100111110111110000000111 00010001000110101000101111000011 001011110101000101010001100100011101001000101100

Round: 11 00010001000110101000101111000011 11000111010100001010001010011100 000011110100000111011001000100000001111010100100

Round: 12 11000111010100001010001010011100 11111110101110001101001111000110 000111110100000110011001100110000010100010110101

Round: 13 11111110101110001101001111000110 01101111011011010011001010110111 000111110000100110001001001000110110101010010001

Round: 14 01101111011011010011001010110111 11001111000001101000001010111001 000110110010100010001101001100110010000100010011

Round: 15 11001111000001101000001010111001 10100000111011001100111101110101 000110010010110010001100101001110000000100000110

Round: 16 10100000111011001100111101110101 11001010011100110010011000011101 010100010010110010001100000101110000001111000010

Round: Swap 11001010011100110010011000011101 10100000111011001100111101110101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303131313131

After Initial Permutation: 00FF00F800FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001001 01110010010011100000110001100010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011100000110001100010 00100100011100011010010011101100 110100001010110000100110011000101010010001001100

Round: 4 00100100011100011010010011101100 11111101000011111110010000100101 111000001010011000100110011010001011010110001010

Round: 5 11111101000011111110010000100101 01010011011100110001110110011001 111000001001011000100110001011000101010000101011

Round: 6 01010011011100110001110110011001 10000100101110011100011011100100 111000001001001001110010010011100101100001100010

Round: 7 10000100101110011100011011100100 11101011110010010000001001111000 101001001101001001110010100001001100100101111000

Round: 8 11101011110010010000001001111000 00000100010100111111011001100011 101001100101001101010010100000011001111001010000

Round: 9 00000100010100111111011001100011 01011100100010111000111111001001 001001100101001101010011110010010001001001011000

Round: 10 01011100100010111000111111001001 11101111000101100001011111100010 001011110101000101010001100100011101001000101100

Round: 11 11101111000101100001011111100010 11111000101110000011100011011010 000011110100000111011001000100000001111010100100

Round: 12 11111000101110000011100011011010 11010110011001101001101100011101 000111110100000110011001100110000010100010110101

Round: 13 11010110011001101001101100011101 11000101111010011110101110100110 000111110000100110001001001000110110101010010001

Round: 14 11000101111010011110101110100110 01010010000000000000010111111110 000110110010100010001101001100110010000100010011

Round: 15 01010010000000000000010111111110 00100001011010111110010111110100 000110010010110010001100101001110000000100000110

Round: 16 00100001011010111110010111110100 01011101010010000100011100011101 010100010010110010001100000101110000001111000010

Round: Swap 01011101010010000100011100011101 00100001011010111110010111110100 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3031313131313131

After Initial Permutation: 00FF00FE00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001111 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001111 01110010010011000000010001000010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011000000010001000010 00110101000101011011000001100011 110100001010110000100110011000101010010001001100

Round: 4 00110101000101011011000001100011 01011010010010101010101111001101 111000001010011000100110011010001011010110001010

Round: 5 01011010010010101010101111001101 01001110000111110000101001011111 111000001001011000100110001011000101010000101011

Round: 6 01001110000111110000101001011111 11100101111010101100110110101001 111000001001001001110010010011100101100001100010

Round: 7 11100101111010101100110110101001 00010100111100011001111011000011 101001001101001001110010100001001100100101111000

Round: 8 00010100111100011001111011000011 00111101110110001010101011000001 101001100101001101010010100000011001111001010000

Round: 9 00111101110110001010101011000001 01100100000011001000100101000000 001001100101001101010011110010010001001001011000

Round: 10 01100100000011001000100101000000 01110011110100100000101111111001 001011110101000101010001100100011101001000101100

Round: 11 01110011110100100000101111111001 01101110010011101000110111101111 000011110100000111011001000100000001111010100100

Round: 12 01101110010011101000110111101111 00011010100010001001110010111101 000111110100000110011001100110000010100010110101

Round: 13 00011010100010001001110010111101 11000001100011000010101110110011 000111110000100110001001001000110110101010010001

Round: 14 11000001100011000010101110110011 01010000111101101101100110111100 000110110010100010001101001100110010000100010011

Round: 15 01010000111101101101100110111100 00111110011111000000100110101101 000110010010110010001100101001110000000100000110

Round: 16 00111110011111000000100110101101 11010010000000101011001110011010 010100010010110010001100000101110000001111000010

Round: Swap 11010010000000101011001110011010 00111110011111000000100110101101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131203030303030

After Initial Permutation: 00FB000300FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101101111110011110110010 010100000010110010101100010001000010001111000110

Round: 2 00000000101101111110011110110010 11101010101011001001001001101000 010100001010110010100100010101001010000101000001

Round: 3 11101010101011001001001001101000 00011101111001100011101001100010 110100001010110000100110011000101010010001001100

Round: 4 00011101111001100011101001100010 00111011111001011111111000100001 111000001010011000100110011010001011010110001010

Round: 5 00111011111001011111111000100001 11011110010010110110101000011011 111000001001011000100110001011000101010000101011

Round: 6 11011110010010110110101000011011 11101010010100110001110111010111 111000001001001001110010010011100101100001100010

Round: 7 11101010010100110001110111010111 10010011011111001100010001000111 101001001101001001110010100001001100100101111000

Round: 8 10010011011111001100010001000111 01101000011111001101110101001000 101001100101001101010010100000011001111001010000

Round: 9 01101000011111001101110101001000 01110001101111100010010000111101 001001100101001101010011110010010001001001011000

Round: 10 01110001101111100010010000111101 11110100111100101010100100110001 001011110101000101010001100100011101001000101100

Round: 11 11110100111100101010100100110001 00011001101000111100001101111101 000011110100000111011001000100000001111010100100

Round: 12 00011001101000111100001101111101 00000011000100100111101101000001 000111110100000110011001100110000010100010110101

Round: 13 00000011000100100111101101000001 11001110101001111101110000000100 000111110000100110001001001000110110101010010001

Round: 14 11001110101001111101110000000100 11100010101100110110111000000001 000110110010100010001101001100110010000100010011

Round: 15 11100010101100110110111000000001 00010110011010101101001001101100 000110010010110010001100101001110000000100000110

Round: 16 00010110011010101101001001101100 00100000000111101000101110010000 010100010010110010001100000101110000001111000010

Round: Swap 00100000000111101000101110010000 00010110011010101101001001101100 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303031313131

After Initial Permutation: 00FF00F000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101000001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101000001 01111000010111000000110001100011 010100001010110010100100010101001010000101000001

Round: 3 01111000010111000000110001100011 11101100111100000011111110100010 110100001010110000100110011000101010010001001100

Round: 4 11101100111100000011111110100010 11111001100011010000110101001111 111000001010011000100110011010001011010110001010

Round: 5 11111001100011010000110101001111 10010101111001111111101111100111 111000001001011000100110001011000101010000101011

Round: 6 10010101111001111111101111100111 10000001010000001010111011010000 111000001001001001110010010011100101100001100010

Round: 7 10000001010000001010111011010000 11010000010110111110100111111110 101001001101001001110010100001001100100101111000

Round: 8 11010000010110111110100111111110 10001000111100011010100111000111 101001100101001101010010100000011001111001010000

Round: 9 10001000111100011010100111000111 01011011000101011101001010101101 001001100101001101010011110010010001001001011000

Round: 10 01011011000101011101001010101101 10100001101110010100000111110110 001011110101000101010001100100011101001000101100

Round: 11 10100001101110010100000111110110 11110111100110111111010100111011 000011110100000111011001000100000001111010100100

Round: 12 11110111100110111111010100111011 00000010000101100001011010110011 000111110100000110011001100110000010100010110101

Round: 13 00000010000101100001011010110011 11100100101100101101011110101010 000111110000100110001001001000110110101010010001

Round: 14 11100100101100101101011110101010 00100001101100100110011001000100 000110110010100010001101001100110010000100010011

Round: 15 00100001101100100110011001000100 11110001100111100110111011111011 000110010010110010001100101001110000000100000110

Round: 16 11110001100111100110111011111011 11011111110111111001100110001100 010100010010110010001100000101110000001111000010

Round: Swap 11011111110111111001100110001100 11110001100111100110111011111011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313130313131

After Initial Permutation: 00FF00EF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101011110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101011110 01110000110011001000011001100001 010100001010110010100100010101001010000101000001

Round: 3 01110000110011001000011001100001 01100000011111101001111110000001 110100001010110000100110011000101010010001001100

Round: 4 01100000011111101001111110000001 00110010100100110100010100001100 111000001010011000100110011010001011010110001010

Round: 5 00110010100100110100010100001100 11101111001101101110111110111100 111000001001011000100110001011000101010000101011

Round: 6 11101111001101101110111110111100 11101100000011000110000111100000 111000001001001001110010010011100101100001100010

Round: 7 11101100000011000110000111100000 01101111111101011000001101110010 101001001101001001110010100001001100100101111000

Round: 8 01101111111101011000001101110010 10110001100111111011001010100101 101001100101001101010010100000011001111001010000

Round: 9 10110001100111111011001010100101 10101011001110000001101101001101 001001100101001101010011110010010001001001011000

Round: 10 10101011001110000001101101001101 00010001110000101001011000101001 001011110101000101010001100100011101001000101100

Round: 11 00010001110000101001011000101001 11010010100001011010000011100110 000011110100000111011001000100000001111010100100

Round: 12 11010010100001011010000011100110 00101101101011011011100000010111 000111110100000110011001100110000010100010110101

Round: 13 00101101101011011011100000010111 10101010111111111100100101111101 000111110000100110001001001000110110101010010001

Round: 14 10101010111111111100100101111101 10110101001111011101001000010001 000110110010100010001101001100110010000100010011

Round: 15 10110101001111011101001000010001 00100110000001000010111100011110 000110010010110010001100101001110000000100000110

Round: 16 00100110000001000010111100011110 11111011010001011110010011010011 010100010010110010001100000101110000001111000010

Round: Swap 11111011010001011110010011010011 00100110000001000010111100011110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131312030303030

After Initial Permutation: 00F7000700FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101110111110011110110110 010100000010110010101100010001000010001111000110

Round: 2 00000000101110111110011110110110 11101110101011101001001100001000 010100001010110010100100010101001010000101000001

Round: 3 11101110101011101001001100001000 11001101110100100111101000111111 110100001010110000100110011000101010010001001100

Round: 4 11001101110100100111101000111111 01010111101100111010111111010101 111000001010011000100110011010001011010110001010

Round: 5 01010111101100111010111111010101 00001110011111100000010011110111 111000001001011000100110001011000101010000101011

Round: 6 00001110011111100000010011110111 01001111011000001110011010011010 111000001001001001110010010011100101100001100010

Round: 7 01001111011000001110011010011010 00110010010110011001110111110110 101001001101001001110010100001001100100101111000

Round: 8 00110010010110011001110111110110 10011101000100010010100110110100 101001100101001101010010100000011001111001010000

Round: 9 10011101000100010010100110110100 10111111110010101111010100000001 001001100101001101010011110010010001001001011000

Round: 10 10111111110010101111010100000001 11110101011010001101000001011011 001011110101000101010001100100011101001000101100

Round: 11 11110101011010001101000001011011 11011000110000110111111000101100 000011110100000111011001000100000001111010100100

Round: 12 11011000110000110111111000101100 01111101010011101101000100100010 000111110100000110011001100110000010100010110101

Round: 13 01111101010011101101000100100010 10111010111111010001110101001001 000111110000100110001001001000110110101010010001

Round: 14 10111010111111010001110101001001 10000100000010100011110101010101 000110110010100010001101001100110010000100010011

Round: 15 10000100000010100011110101010101 00110111100011001001101000001110 000110010010110010001100101001110000000100000110

Round: 16 00110111100011001001101000001110 11110011111101010011011111100000 010100010010110010001100000101110000001111000010

Round: Swap 11110011111101010011011111100000 00110111100011001001101000001110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030313131

After Initial Permutation: 00FF00E000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101010001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101010001 01110010010011100000110001000010 010100001010110010100100010101001010000101000001

Round: 3 01110010010011100000110001000010 00100100011100011010000011110101 110100001010110000100110011000101010010001001100

Round: 4 00100100011100011010000011110101 11110101001111010100000000100111 111000001010011000100110011010001011010110001010

Round: 5 11110101001111010100000000100111 00100111011110001011000111011110 111000001001011000100110001011000101010000101011

Round: 6 00100111011110001011000111011110 10100001000111111010110111011100 111000001001001001110010010011100101100001100010

Round: 7 10100001000111111010110111011100 01010001010100010011101001000010 101001001101001001110010100001001100100101111000

Round: 8 01010001010100010011101001000010 01110010111110010101010110000101 101001100101001101010010100000011001111001010000

Round: 9 01110010111110010101010110000101 10101100000011000101010101011011 001001100101001101010011110010010001001001011000

Round: 10 10101100000011000101010101011011 01111101100110110110000010111100 001011110101000101010001100100011101001000101100

Round: 11 01111101100110110110000010111100 11110101100001000101001110100100 000011110100000111011001000100000001111010100100

Round: 12 11110101100001000101001110100100 01011111001011100011110100001110 000111110100000110011001100110000010100010110101

Round: 13 01011111001011100011110100001110 11010011011001110101100110011011 000111110000100110001001001000110110101010010001

Round: 14 11010011011001110101100110011011 00101001000110111011100111101101 000110110010100010001101001100110010000100010011

Round: 15 00101001000110111011100111101101 00101010100111111010110110100110 000110010010110010001100101001110000000100000110

Round: 16 00101010100111111010110110100110 01001100100111111100011101110101 010100010010110010001100000101110000001111000010

Round: Swap 01001100100111111100011101110101 00101010100111111010110110100110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313120303030

After Initial Permutation: 00EF000F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101000111110011110111110 010100000010110010101100010001000010001111000110

Round: 2 00000000101000111110011110111110 11100110101011011001011101101001 010100001010110010100100010101001010000101000001

Round: 3 11100110101011011001011101101001 01110111110001001010010010101111 110100001010110000100110011000101010010001001100

Round: 4 01110111110001001010010010101111 10100010001000100011111010101001 111000001010011000100110011010001011010110001010

Round: 5 10100010001000100011111010101001 01011100000011101001101000001000 111000001001011000100110001011000101010000101011

Round: 6 01011100000011101001101000001000 11100000100010010111110001000111 111000001001001001110010010011100101100001100010

Round: 7 11100000100010010111110001000111 00011000110010100101111111000101 101001001101001001110010100001001100100101111000

Round: 8 00011000110010100101111111000101 00100011010111001101111111001100 101001100101001101010010100000011001111001010000

Round: 9 00100011010111001101111111001100 10110100001000101111001010100110 001001100101001101010011110010010001001001011000

Round: 10 10110100001000101111001010100110 01000111010001111011100000001110 001011110101000101010001100100011101001000101100

Round: 11 01000111010001111011100000001110 01001001000001011000110000000010 000011110100000111011001000100000001111010100100

Round: 12 01001001000001011000110000000010 00001010101111011101000110100110 000111110100000110011001100110000010100010110101

Round: 13 00001010101111011101000110100110 10110010000011001010010000001000 000111110000100110001001001000110110101010010001

Round: 14 10110010000011001010010000001000 00111001101100111011011011111001 000110110010100010001101001100110010000100010011

Round: 15 00111001101100111011011011111001 00111100101100100100001110011011 000110010010110010001100101001110000000100000110

Round: 16 00111100101100100100001110011011 01010010000111001100010010100010 010100010010110010001100000101110000001111000010

Round: Swap 01010010000111001100010010100010 00111100101100100100001110011011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303131

After Initial Permutation: 00FF00C000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101110001 01110000010011100000100001000010 010100001010110010100100010101001010000101000001

Round: 3 01110000010011100000100001000010 00110100011100011100000011001101 110100001010110000100110011000101010010001001100

Round: 4 00110100011100011100000011001101 10111100001001011000111010010101 111000001010011000100110011010001011010110001010

Round: 5 10111100001001011000111010010101 11001110010110011001110000100010 111000001001011000100110001011000101010000101011

Round: 6 11001110010110011001110000100010 00111110100100110111010011110110 111000001001001001110010010011100101100001100010

Round: 7 00111110100100110111010011110110 11101010111110111101001101110100 101001001101001001110010100001001100100101111000

Round: 8 11101010111110111101001101110100 00101010000000000001110111101101 101001100101001101010010100000011001111001010000

Round: 9 00101010000000000001110111101101 00111010101001001000010111110000 001001100101001101010011110010010001001001011000

Round: 10 00111010101001001000010111110000 11100011110011100101011110110010 001011110101000101010001100100011101001000101100

Round: 11 11100011110011100101011110110010 11111110010000011010110100100101 000011110100000111011001000100000001111010100100

Round: 12 11111110010000011010110100100101 10111111111111110100000111101001 000111110100000110011001100110000010100010110101

Round: 13 10111111111111110100000111101001 00111110100111100000111001110110 000111110000100110001001001000110110101010010001

Round: 14 00111110100111100000111001110110 01010110110100000110100110111001 000110110010100010001101001100110010000100010011

Round: 15 01010110110100000110100110111001 10010100111001000111110101110110 000110010010110010001100101001110000000100000110

Round: 16 10010100111001000111110101110110 01011111101000000011010101001011 010100010010110010001100000101110000001111000010

Round: Swap 01011111101000000011010101001011 10010100111001000111110101110110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131203030

After Initial Permutation: 00DF001F00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000100100111110011110101110 010100000010110010101100010001000010001111000110

Round: 2 00000000100100111110011110101110 01101100111111101000111101001001 010100001010110010100100010101001010000101000001

Round: 3 01101100111111101000111101001001 00000100010101001110111111000000 110100001010110000100110011000101010010001001100

Round: 4 00000100010101001110111111000000 11100001100010011110000001101010 111000001010011000100110011010001011010110001010

Round: 5 11100001100010011110000001101010 11101101110111010011110111001101 111000001001011000100110001011000101010000101011

Round: 6 11101101110111010011110111001101 10110110101111110000101001111000 111000001001001001110010010011100101100001100010

Round: 7 10110110101111110000101001111000 01110111011111111011100000000111 101001001101001001110010100001001100100101111000

Round: 8 01110111011111111011100000000111 01100111101011001011011010011101 101001100101001101010010100000011001111001010000

Round: 9 01100111101011001011011010011101 01001011100111001000010000010110 001001100101001101010011110010010001001001011000

Round: 10 01001011100111001000010000010110 00111110101000010000111111100101 001011110101000101010001100100011101001000101100

Round: 11 00111110101000010000111111100101 00011010011000100110001101000111 000011110100000111011001000100000001111010100100

Round: 12 00011010011000100110001101000111 01001011010011011101010110010001 000111110100000110011001100110000010100010110101

Round: 13 01001011010011011101010110010001 01110001100110100000000001100001 000111110000100110001001001000110110101010010001

Round: 14 01110001100110100000000001100001 01100000110101010100000101100110 000110110010100010001101001100110010000100010011

Round: 15 01100000110101010100000101100110 01111000000011001000101111000010 000110010010110010001100101001110000000100000110

Round: 16 01111000000011001000101111000010 00010110100011001100010011011001 010100010010110010001100000101110000001111000010

Round: Swap 00010110100011001100010011011001 01111000000011001000101111000010 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3030303030303031

After Initial Permutation: 00FF008000FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011100110001 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011100110001 01110010010111100000110001000011 010100001010110010100100010101001010000101000001

Round: 3 01110010010111100000110001000011 00101100001100001011101111010011 110100001010110000100110011000101010010001001100

Round: 4 00101100001100001011101111010011 10001001011010000111101101110001 111000001010011000100110011010001011010110001010

Round: 5 10001001011010000111101101110001 00111100110111110110110010111111 111000001001011000100110001011000101010000101011

Round: 6 00111100110111110110110010111111 00010100110011010001101010000000 111000001001001001110010010011100101100001100010

Round: 7 00010100110011010001101010000000 01110001011110010011010011000101 101001001101001001110010100001001100100101111000

Round: 8 01110001011110010011010011000101 01110100101111001111111011011100 101001100101001101010010100000011001111001010000

Round: 9 01110100101111001111111011011100 10100001001010101111110000101100 001001100101001101010011110010010001001001011000

Round: 10 10100001001010101111110000101100 01111010010100011110011110001100 001011110101000101010001100100011101001000101100

Round: 11 01111010010100011110011110001100 11110011111001111011011010011011 000011110100000111011001000100000001111010100100

Round: 12 11110011111001111011011010011011 11101001111100111111010010001001 000111110100000110011001100110000010100010110101

Round: 13 11101001111100111111010010001001 01000111011010011010000111011111 000111110000100110001001001000110110101010010001

Round: 14 01000111011010011010000111011111 00110001000001111100011101001110 000110110010100010001101001100110010000100010011

Round: 15 00110001000001111100011101001110 01100011110011000110011010000110 000110010010110010001100101001110000000100000110

Round: 16 01100011110011000110011010000110 00100001000100100000101100001100 010100010010110010001100000101110000001111000010

Round: Swap 00100001000100100000101100001100 01100011110011000110011010000110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131313131

After Initial Permutation: 00FF00FF00FF0000

Left Half Right Half Sub Key

Round: 1 00000000111111110000000000000000 00000000101100111110011101001110 010100000010110010101100010001000010001111000110

Round: 2 00000000101100111110011101001110 01111010110011101000111001000000 010100001010110010100100010101001010000101000001

Round: 3 01111010110011101000111001000000 10011000110111001011101101001010 110100001010110000100110011000101010010001001100

Round: 4 10011000110111001011101101001010 11001111010110011100111000010111 111000001010011000100110011010001011010110001010

Round: 5 11001111010110011100111000010111 11110101100001011011101001001111 111000001001011000100110001011000101010000101011

Round: 6 11110101100001011011101001001111 10101011011000111101111101101000 111000001001001001110010010011100101100001100010

Round: 7 10101011011000111101111101101000 01110011100111000110111101101100 101001001101001001110010100001001100100101111000

Round: 8 01110011100111000110111101101100 00101101000000001001110110001101 101001100101001101010010100000011001111001010000

Round: 9 00101101000000001001110110001101 01000010110101100010110011101100 001001100101001101010011110010010001001001011000

Round: 10 01000010110101100010110011101100 00010010111100100101111100011111 001011110101000101010001100100011101001000101100

Round: 11 00010010111100100101111100011111 01110010000111111000101111110110 000011110100000111011001000100000001111010100100

Round: 12 01110010000111111000101111110110 00000011011010101011100110010111 000111110100000110011001100110000010100010110101

Round: 13 00000011011010101011100110010111 00111000000010001001000101101110 000111110000100110001001001000110110101010010001

Round: 14 00111000000010001001000101101110 00100000011010101110100010110011 000110110010100010001101001100110010000100010011

Round: 15 00100000011010101110100010110011 11111001000111111101100001010101 000110010010110010001100101001110000000100000110

Round: 16 11111001000111111101100001010101 00110011111011101111110000011100 010100010010110010001100000101110000001111000010

Round: Swap 00110011111011101111110000011100 11111001000111111101100001010101 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3131313131312D2D

After Initial Permutation: 003FC0FF00FFC000

Left Half Right Half Sub Key

Round: 1 00000000111111111100000000000000 10100000011101110011011111001110 010100000010110010101100010001000010001111000110

Round: 2 10100000011101110011011111001110 01101011000100100001001110100101 010100001010110010100100010101001010000101000001

Round: 3 01101011000100100001001110100101 00110110111001100100011010111101 110100001010110000100110011000101010010001001100

Round: 4 00110110111001100100011010111101 11011101011001101111000011101110 111000001010011000100110011010001011010110001010

Round: 5 11011101011001101111000011101110 11001101010000101110111000000001 111000001001011000100110001011000101010000101011

Round: 6 11001101010000101110111000000001 01011001000100001111010000100110 111000001001001001110010010011100101100001100010

Round: 7 01011001000100001111010000100110 01110001001110001001101110001011 101001001101001001110010100001001100100101111000

Round: 8 01110001001110001001101110001011 10111110011001010000000111010011 101001100101001101010010100000011001111001010000

Round: 9 10111110011001010000000111010011 10001111001011111011001010010011 001001100101001101010011110010010001001001011000

Round: 10 10001111001011111011001010010011 11011010101010100110111010000010 001011110101000101010001100100011101001000101100

Round: 11 11011010101010100110111010000010 11001001001010000101011110011001 000011110100000111011001000100000001111010100100

Round: 12 11001001001010000101011110011001 10101010110101100001101100101111 000111110100000110011001100110000010100010110101

Round: 13 10101010110101100001101100101111 10111001101001011101101000010100 000111110000100110001001001000110110101010010001

Round: 14 10111001101001011101101000010100 01011111001001010111010100100010 000110110010100010001101001100110010000100010011

Round: 15 01011111001001010111010100100010 00111110010010100011101000001010 000110010010110010001100101001110000000100000110

Round: 16 00111110010010100011101000001010 11000000010100101011011101000011 010100010010110010001100000101110000001111000010

Round: Swap 11000000010100101011011101000011 00111110010010100011101000001010 010100010010110010001100000101110000001111000010

Hasil enkrip dalam bentuk biner = 0111000001011110111100100010011101100100100110100110100100011000011100000101111011110010001001110110010010011010011010010001100000000110100011111110101111011011001100011111011001101101011100010111000001011110111100100010011101100100100110100110100100011000011100000101111011110010001001110110010010011010011010010001100001010110111111010100110011110100100010011000000011001000101111010111000001011110111100100010011101100100100110100110100100011000111100100001110100001010100101010100001101010111110011101101000101101100011100001011010111111011010000010101111001111000011001010111000001011110111100100010011101100100100110100110100100011000000110110101110000101111011010010001001110110110011110101110100001110000010111101111001000100111011001001001101001101001000110001011000010111011010000100000011101111001110001001111011010110001111010110100101111110010011010101011100110101110010011000101101001110000010111101111001000100111011001001001101001101001000110000110001011100101000010001111100010111101000001110100111101011101011100000101111011110010001001110110010010011010011010010001100001101110010001011111001100100111110001100001101010001011001000011111100000010001011110101110110111000001110100110010010011001111011100000101111011110010001001110110010010011010011010010001100001000001100100100011110101111000100011011000100101001011010101000111000001011110111100100010011101100100100110100110100100011000001111011011011001111111111110000011000110001011010001010011111000001000101001100010100011110011000011001010011001000011100010110111000001011110111100100010011101100100100110100110100100011000101000101001010101100010111100110110011011111000001000101101001101110000010111101111001000100111011001001001101001101001000110000011110110110110011111111111100000110001100010110100010100111110111101011001111001010110111000101110110010111011111110001110000001110000010111101111001000100111011001001001101001101001000110000101000001101011111110000101010100100110010011001011101011010001011100000101111011110010001001110110010010011010011010010001100001110000010111101111001000100111011001001001101001101001000110001100101011001101110000011000100101111010001100010101010000101011011100000101111011110010001001110110010010011010011010010001100010111010100010100111010010011001111111111010001111110011101101000111000001011110111100100010011101100100100110100110100100011000011100000101111011110010001001110110010010011010011010010001100001000000101111001100101110110000100000001110001011110011000001110111000001011110111100100010011101100100100110100110100100011000111011010100000111110000000000111101111010000001011011011010100101110000010111101111001000100111011001001001101001101001000110001100010010011110001010110010010100010000110010001010100000100010111000100111000000110111101111011110111111010100100111101001110001101100011100001011010111111011010000010101111001111000011001010111000001011110111100100010011101100100100110100110100100011000010101101111110101001100111101001000100110000000110010001011110101110000010111101111001000100111011001001001101001101001000110001110001001110000001101111011110111101111110101001001111010011100111010110100101111110010011010101011100110101110010011000101101001110000010111101111001000100111011001001001101001101001000110000001101101011100001011110110100100010011101101100111101011101000011100000101111011110010001001110110010010011010011010010001100000111010010000101000011101000001100111110101110100011001110011111101100001110011011110101001011010110110111111000111001000101111011100000101111011110010001001110110010010011010011010010001100001100010111001010000100011111000101111010000011101001111010111010111000001011110111100100010011101100100100110100110100100011000110001001001111000101011001001010001000011001000101010000010001001101111010111000000001000000010000101001110010001011100000010010111000001011110111100100010011101100100100110100110100100011000010000011001001000111101011110001000110110001001010010110101010001110000010111101111001000100111011001001001101001101001000110001010101110011000101011010010100001000011001010110011111001001111101111101001110110011001001000111111001011100000000011111100110001110000010111101111001000100111011001001001101001101001000110001010001010010101011000101111001101100110111110000010001011010011011100000101111011110010001001110110010010011010011010010001100001110000010111101111001000100111011001001001101001101001000110001110000011111010010001101010011100001000011010101110101101111100110110000111001101111010100101101011011011111100011100100010111101010000011010111111100001010101001001100100110010111010110100010111000001011110111100100010011101100100100110100110100100011000111110000001000101111010111011011100000111010011001001001100111111110111101101101100100111111010110010101001101001000001010001110110111101011100000000100000001000010100111001000101110000001001101110101000101001110100100110011111111110100011111100111011010001110000010111101111001000100111011001001001101001101001000110000000010011100000011110011101011010110010010101010011101101011101110111110011010100000110000010111001000100101001010001010101000000000110100011111110101111011011001100011111011001101101011100011110110101000001111100000000001111011110100000010110110110101001011100000101111011110010001001110110010010011010011010010001100000001110110101011010001010101011111001011010011001100000010001110011111011100111001101111010111111011111000110010101000010101110111000100111000000110111101111011110111111010100100111101001110001110000010111101111001000100111011001001001101001101001000110000101011011111101010011001111010010001001100000001100100010111101001110100100001010000111010000011001111101011101000110011100111111100010011100000011011110111101111011111101010010011110100111001110001001110000001101111011110111101111110101001001111010011100000001101000111111101011110110110011000111110110011011010111000100011011010111000010111101101001000100111011011001111010111010001110110100100100010011110111000101000011101010100111111000001010111000100111000000110111101111011110111111010100100111101001110000001110110101011010001010101011111001011010011001100000010001111110001001110000001101111011110111101111110101001001111010011100000001001011110010010010001101101001100101100010001010100000110111010110011110100111100101111111111101101000101011011010111101111110001001110000001101111011110111101111110101001001111010011100010110011100101110111110010010100100001111001100010101010100010111100010011100000011011110111101111011111101010010011110100111001101010011001110101101100010101011011100110101010101000101111001001111011011011001111111111110000011000110001011010001010011111011100010011100000011011110111101111011111101010010011110100111001110001001110000001101111011110111101111110101001001111010011100111000100111000000110111101111011110111111010100100111101001110000001010011010111001010010010010111100101010000101001100001001110100110101000011111011100100100111001110001111100110101110110000111000100111000000110111101111011110111111010100100111101001110011100010011100000011011110111101111011111101010010011110100111001110001001110000001101111011110111101111110101001001111010011100000010010100101001110100101110011100000110000000100001110001111111000100100111100010101100100101000100001100100010101000001000101110001001110000001101111011110111101111110101001001111010011100111000100111000000110111101111011110111111010100100111101001110011100010011100000011011110111101111011111101010010011110100111000000010110111111100001001010101010011100100011000111000101000100

Hasil enkrip dalam bentuk hexa

1. Bagaimana proses dan hasil dekripsi pada setiap fase?

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 068FEBDB31F66D71

After Initial Permutation: ECB863DE2EF44E2F

Left Half Right Half Sub Key

Round: 1 00101110111101000100111000101111 00010001101100001110001100100000 010100000010110010101100010001000010001111000110

Round: 2 00010001101100001110001100100000 11111000010111001001111101001101 010100001010110010100100010101001010000101000001

Round: 3 11111000010111001001111101001101 10010001010101111010010110001101 110100001010110000100110011000101010010001001100

Round: 4 10010001010101111010010110001101 10100110010011111101000001111010 111000001010011000100110011010001011010110001010

Round: 5 10100110010011111101000001111010 00001000001110110110101000100000 111000001001011000100110001011000101010000101011

Round: 6 00001000001110110110101000100000 11010110010011110011010100000110 111000001001001001110010010011100101100001100010

Round: 7 11010110010011110011010100000110 11001101110011000100100100111101 101001001101001001110010100001001100100101111000

Round: 8 11001101110011000100100100111101 00000110101100111100101101011001 101001100101001101010010100000011001111001010000

Round: 9 00000110101100111100101101011001 00100001010101101111001010110000 001001100101001101010011110010010001001001011000

Round: 10 00100001010101101111001010110000 11110100101010111110001010101111 001011110101000101010001100100011101001000101100

Round: 11 11110100101010111110001010101111 00010000010000001101011010010110 000011110100000111011001000100000001111010100100

Round: 12 00010000010000001101011010010110 10011010010011111011010010101110 000111110100000110011001100110000010100010110101

Round: 13 10011010010011111011010010101110 01101000111011101000111001001000 000111110000100110001001001000110110101010010001

Round: 14 01101000111011101000111001001000 00000000101100111110011110001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 56FD4CF48980C8BD

After Initial Permutation: 4F8B8F92FA8AD601

Left Half Right Half Sub Key

Round: 1 11111010100010101101011000000001 11001111000011111110001000011101 010100000010110010101100010001000010001111000110

Round: 2 11001111000011111110001000011101 00011001010111000000001110101011 010100001010110010100100010101001010000101000001

Round: 3 00011001010111000000001110101011 00100000100001111001101010101000 110100001010110000100110011000101010010001001100

Round: 4 00100000100001111001101010101000 11001001101000011110100010100000 111000001010011000100110011010001011010110001010

Round: 5 11001001101000011110100010100000 00001101100001010110100011101011 111000001001011000100110001011000101010000101011

Round: 6 00001101100001010110100011101011 00101101111000111111100010000111 111000001001001001110010010011100101100001100010

Round: 7 00101101111000111111100010000111 10110010000101110011001111100101 101001001101001001110010100001001100100101111000

Round: 8 10110010000101110011001111100101 01011101000000110011000100100001 101001100101001101010010100000011001111001010000

Round: 9 01011101000000110011000100100001 10011010000101111111101010110100 001001100101001101010011110010010001001001011000

Round: 10 10011010000101111111101010110100 01110110111100100010001101001001 001011110101000101010001100100011101001000101100

Round: 11 01110110111100100010001101001001 01011001101001100000111100100001 000011110100000111011001000100000001111010100100

Round: 12 01011001101001100000111100100001 10100011100000101100010110101101 000111110100000110011001100110000010100010110101

Round: 13 10100011100000101100010110101101 11000010011010100001100001001010 000111110000100110001001001000110110101010010001

Round: 14 11000010011010100001100001001010 00000000101100101110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100101110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111100000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: F21D0A954357CED1

After Initial Permutation: F1AB6ABAC9014675

Left Half Right Half Sub Key

Round: 1 11001001000000010100011001110101 10100111110100100000101101001001 010100000010110010101100010001000010001111000110

Round: 2 10100111110100100000101101001001 10001000100010101011001010011000 010100001010110010100100010101001010000101000001

Round: 3 10001000100010101011001010011000 00111011001010010000000000000110 110100001010110000100110011000101010010001001100

Round: 4 00111011001010010000000000000110 11010111011000110011110001001100 111000001010011000100110011010001011010110001010

Round: 5 11010111011000110011110001001100 10100110001111100010001111101000 111000001001011000100110001011000101010000101011

Round: 6 10100110001111100010001111101000 11001101110110110101001111000010 111000001001001001110010010011100101100001100010

Round: 7 11001101110110110101001111000010 10110010111110110101010101000101 101001001101001001110010100001001100100101111000

Round: 8 10110010111110110101010101000101 10101000010001101001111011110000 101001100101001101010010100000011001111001010000

Round: 9 10101000010001101001111011110000 01001011110111011011110110111110 001001100101001101010011110010010001001001011000

Round: 10 01001011110111011011110110111110 10000101001100100010111001111001 001011110101000101010001100100011101001000101100

Round: 11 10000101001100100010111001111001 11100110111000001110101100000011 000011110100000111011001000100000001111010100100

Round: 12 11100110111000001110101100000011 10101000111111001001101111011010 000111110100000110011001100110000010100010110101

Round: 13 10101000111111001001101111011010 01111010110011101000011001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000011001000000 00000000101100111110011101010110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101010110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011100111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 6C70B5FB415E7865

After Initial Permutation: FB6EA59C0CCF6928

Left Half Right Half Sub Key

Round: 1 00001100110011110110100100101000 10100100100011100010100000010100 010100000010110010101100010001000010001111000110

Round: 2 10100100100011100010100000010100 10110100010100110000011010001101 010100001010110010100100010101001010000101000001

Round: 3 10110100010100110000011010001101 00010110000110001000101110111110 110100001010110000100110011000101010010001001100

Round: 4 00010110000110001000101110111110 00011000010100101101010100010110 111000001010011000100110011010001011010110001010

Round: 5 00011000010100101101010100010110 00010010101000010000101011111000 111000001001011000100110001011000101010000101011

Round: 6 00010010101000010000101011111000 00011011001011001111110001000111 111000001001001001110010010011100101100001100010

Round: 7 00011011001011001111110001000111 00011110000111101100001111101010 101001001101001001110010100001001100100101111000

Round: 8 00011110000111101100001111101010 11110110101110110110001000011101 101001100101001101010010100000011001111001010000

Round: 9 11110110101110110110001000011101 11110101101011011110000100111000 001001100101001101010011110010010001001001011000

Round: 10 11110101101011011110000100111000 10101101011100001010010101011000 001011110101000101010001100100011101001000101100

Round: 11 10101101011100001010010101011000 01100100110010011111100100011010 000011110100000111011001000100000001111010100100

Round: 12 01100100110010011111100100011010 01101010110011111101010001000010 000111110100000110011001100110000010100010110101

Round: 13 01101010110011111101010001000010 01100010111011001000001001001000 000111110000100110001001001000110110101010010001

Round: 14 01100010111011001000001001001000 00000000101100111110011110110000 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110000 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 1B5C2F6913B67AE8

After Initial Permutation: CA73261DA0ECCF75

Left Half Right Half Sub Key

Round: 1 10100000111011001100111101110101 11001111000001101000001010111001 010100000010110010101100010001000010001111000110

Round: 2 11001111000001101000001010111001 01101111011011010011001010110111 010100001010110010100100010101001010000101000001

Round: 3 01101111011011010011001010110111 11111110101110001101001111000110 110100001010110000100110011000101010010001001100

Round: 4 11111110101110001101001111000110 11000111010100001010001010011100 111000001010011000100110011010001011010110001010

Round: 5 11000111010100001010001010011100 00010001000110101000101111000011 111000001001011000100110001011000101010000101011

Round: 6 00010001000110101000101111000011 01101100100111110111110000000111 111000001001001001110010010011100101100001100010

Round: 7 01101100100111110111110000000111 00111111101001011100011100010110 101001001101001001110010100001001100100101111000

Round: 8 00111111101001011100011100010110 11110001010011010111110111000011 101001100101001101010010100000011001111001010000

Round: 9 11110001010011010111110111000011 01000101000101101000110100001101 001001100101001101010011110010010001001001011000

Round: 10 01000101000101101000110100001101 00011100010010110011000000011011 001011110101000101010001100100011101001000101100

Round: 11 00011100010010110011000000011011 10000101000011000100010001000011 000011110100000111011001000100000001111010100100

Round: 12 10000101000011000100010001000011 00100011010100010100001110101111 000111110100000110011001100110000010100010110101

Round: 13 00100011010100010100001110101111 11100010011011100001100000001010 000111110000100110001001001000110110101010010001

Round: 14 11100010011011100001100000001010 00000000101100011110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100011110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111010000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: B0BB420779C4F6B1

After Initial Permutation: 74D3689AE3D3124E

Left Half Right Half Sub Key

Round: 1 11100011110100110001001001001110 11010100101001000000111001011111 010100000010110010101100010001000010001111000110

Round: 2 11010100101001000000111001011111 11110110100100011100111110010101 010100001010110010100100010101001010000101000001

Round: 3 11110110100100011100111110010101 01001000100001100111010100100000 110100001010110000100110011000101010010001001100

Round: 4 01001000100001100111010100100000 01011100010010001010111011101100 111000001010011000100110011010001011010110001010

Round: 5 01011100010010001010111011101100 00110001000100100011011010100111 111000001001011000100110001011000101010000101011

Round: 6 00110001000100100011011010100111 01000001100101011110101111010101 111000001001001001110010010011100101100001100010

Round: 7 01000001100101011110101111010101 01010111111000101011001000010010 101001001101001001110010100001001100100101111000

Round: 8 01010111111000101011001000010010 10100011000111000001000111110110 101001100101001101010010100000011001111001010000

Round: 9 10100011000111000001000111110110 11000101101110000001010011111010 001001100101001101010011110010010001001001011000

Round: 10 11000101101110000001010011111010 01100100001001111000100110000000 001011110101000101010001100100011101001000101100

Round: 11 01100100001001111000100110000000 10011101010010110101100001111101 000011110100000111011001000100000001111010100100

Round: 12 10011101010010110101100001111101 10101100011100001011111111010000 000111110100000110011001100110000010100010110101

Round: 13 10101100011100001011111111010000 01110010010111000000110001100011 000111110000100110001001001000110110101010010001

Round: 14 01110010010111000000110001100011 00000000101100111110011100110011 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100110011 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010000010 010100010010110010001100000101110000001111000010

Data Being Encrypted: EB4BF26AB9AE4C5A

After Initial Permutation: CF946013353DFBAF

Left Half Right Half Sub Key

Round: 1 00110101001111011111101110101111 01100001011011011010000011110011 010100000010110010101100010001000010001111000110

Round: 2 01100001011011011010000011110011 00100000000101110000010111001110 010100001010110010100100010101001010000101000001

Round: 3 00100000000101110000010111001110 11000111000000000011010100011011 110100001010110000100110011000101010010001001100

Round: 4 11000111000000000011010100011011 01100000110010101111110001010000 111000001010011000100110011010001011010110001010

Round: 5 01100000110010101111110001010000 00010010000100100101011111100010 111000001001011000100110001011000101010000101011

Round: 6 00010010000100100101011111100010 01100000101101001001000011110001 111000001001001001110010010011100101100001100010

Round: 7 01100000101101001001000011110001 10100000001011100110100011110010 101001001101001001110010100001001100100101111000

Round: 8 10100000001011100110100011110010 10010000111011111001001001011110 101001100101001101010010100000011001111001010000

Round: 9 10010000111011111001001001011110 10011110001100100110110011110011 001001100101001101010011110010010001001001011000

Round: 10 10011110001100100110110011110011 01100000011000011110011111010000 001011110101000101010001100100011101001000101100

Round: 11 01100000011000011110011111010000 01101101101011000010100010100000 000011110100000111011001000100000001111010100100

Round: 12 01101101101011000010100010100000 00101000010001111001000001000010 000111110100000110011001100110000010100010110101

Round: 13 00101000010001111001000001000010 01101010111011001000001001101000 000111110000100110001001001000110110101010010001

Round: 14 01101010111011001000001001101000 00000000101100111110011110110010 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110010 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 62E508F8BD074F5D

After Initial Permutation: CB98F2F21A1BDC61

Left Half Right Half Sub Key

Round: 1 00011010000110111101110001100001 00010010010101010000100001010010 010100000010110010101100010001000010001111000110

Round: 2 00010010010101010000100001010010 01100100100011000111010011110010 010100001010110010100100010101001010000101000001

Round: 3 01100100100011000111010011110010 00000111101100001110111101000101 110100001010110000100110011000101010010001001100

Round: 4 00000111101100001110111101000101 01001011101000100010001000010011 111000001010011000100110011010001011010110001010

Round: 5 01001011101000100010001000010011 00010001010110001101010110101111 111000001001011000100110001011000101010000101011

Round: 6 00010001010110001101010110101111 01111110001010001111110001000100 111000001001001001110010010011100101100001100010

Round: 7 01111110001010001111110001000100 11010001101001000000010010011001 101001001101001001110010100001001100100101111000

Round: 8 11010001101001000000010010011001 00000011110000101111101100011011 101001100101001101010010100000011001111001010000

Round: 9 00000011110000101111101100011011 10100001000011011001101101001100 001001100101001101010011110010010001001001011000

Round: 10 10100001000011011001101101001100 01110011100011000101100001000010 001011110101000101010001100100011101001000101100

Round: 11 01110011100011000101100001000010 00010110010010000111000100000110 000011110100000111011001000100000001111010100100

Round: 12 00010110010010000111000100000110 00100011010001100100011010101111 000111110100000110011001100110000010100010110101

Round: 13 00100011010001100100011010101111 11100010001011100001100001001010 000111110000100110001001001000110110101010010001

Round: 14 11100010001011100001100001001010 00000000101101111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101101111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111110110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 6E45F327C61A8B21

After Initial Permutation: 17241BCE548D617D

Left Half Right Half Sub Key

Round: 1 01010100100011010110000101111101 10111101001001100100001011111010 010100000010110010101100010001000010001111000110

Round: 2 10111101001001100100001011111010 10111011010101000101011111011000 010100001010110010100100010101001010000101000001

Round: 3 10111011010101000101011111011000 10010101100111010110100011111111 110100001010110000100110011000101010010001001100

Round: 4 10010101100111010110100011111111 10101110010110110000010111010010 111000001010011000100110011010001011010110001010

Round: 5 10101110010110110000010111010010 11111111001001100100101010110011 111000001001011000100110001011000101010000101011

Round: 6 11111111001001100100101010110011 11000101001001011110100011110100 111000001001001001110010010011100101100001100010

Round: 7 11000101001001011110100011110100 11010001000111101001010001011011 101001001101001001110010100001001100100101111000

Round: 8 11010001000111101001010001011011 00001111100000011011011010001111 101001100101001101010010100000011001111001010000

Round: 9 00001111100000011011011010001111 10110000000010101100111011010110 001001100101001101010011110010010001001001011000

Round: 10 10110000000010101100111011010110 00001111011101100010011000110000 001011110101000101010001100100011101001000101100

Round: 11 00001111011101100010011000110000 01100001110000001111110000010111 000011110100000111011001000100000001111010100100

Round: 12 01100001110000001111110000010111 01110011001011111111110110010001 000111110100000110011001100110000010100010110101

Round: 13 01110011001011111111110110010001 01101010011011000000000001001010 000111110000100110001001001000110110101010010001

Round: 14 01101010011011000000000001001010 00000000101100111110011110110101 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110101 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000100 010100010010110010001100000101110000001111000010

Data Being Encrypted: F8117AEDC1D324CF

After Initial Permutation: BD27C8BAB94D8DA4

Left Half Right Half Sub Key

Round: 1 10111001010011011000110110100100 10111000101000010111011111110100 010100000010110010101100010001000010001111000110

Round: 2 10111000101000010111011111110100 10100110100100011000011011000100 010100001010110010100100010101001010000101000001

Round: 3 10100110100100011000011011000100 00101100001110010000000010111000 110100001010110000100110011000101010010001001100

Round: 4 00101100001110010000000010111000 01100001111110110011001001001100 111000001010011000100110011010001011010110001010

Round: 5 01100001111110110011001001001100 00100000001000010010001101100100 111000001001011000100110001011000101010000101011

Round: 6 00100000001000010010001101100100 01101111100001001011011000111000 111000001001001001110010010011100101100001100010

Round: 7 01101111100001001011011000111000 10011001010000000000011000010011 101001001101001001110010100001001100100101111000

Round: 8 10011001010000000000011000010011 10000000011011111000110100111001 101001100101001101010010100000011001111001010000

Round: 9 10000000011011111000110100111001 11101011111011000010111100011101 001001100101001101010011110010010001001001011000

Round: 10 11101011111011000010111100011101 00111000001111010010001101010100 001011110101000101010001100100011101001000101100

Round: 11 00111000001111010010001101010100 11000100010011111000011100111110 000011110100000111011001000100000001111010100100

Round: 12 11000100010011111000011100111110 01100010001010111111011100111001 000111110100000110011001100110000010100010110101

Round: 13 01100010001010111111011100111001 01101010011011000000110001001011 000111110000100110001001001000110110101010010001

Round: 14 01101010011011000000110001001011 00000000101100111110011110111111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110111111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000001110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 41923D788D894B54

After Initial Permutation: C98E9475320C7C42

Left Half Right Half Sub Key

Round: 1 00110010000011000111110001000010 10011110000111111011001110000001 010100000010110010101100010001000010001111000110

Round: 2 10011110000111111011001110000001 00101010001110010010001011101000 010100001010110010100100010101001010000101000001

Round: 3 00101010001110010010001011101000 11010011111101000100110001101011 110100001010110000100110011000101010010001001100

Round: 4 11010011111101000100110001101011 11101111010101011000000101001101 111000001010011000100110011010001011010110001010

Round: 5 11101111010101011000000101001101 01100100011100100100111011110110 111000001001011000100110001011000101010000101011

Round: 6 01100100011100100100111011110110 10001000000100111010010101100010 111000001001001001110010010011100101100001100010

Round: 7 10001000000100111010010101100010 00110011100110100101101110011101 101001001101001001110010100001001100100101111000

Round: 8 00110011100110100101101110011101 10000111010000000101111111101100 101001100101001101010010100000011001111001010000

Round: 9 10000111010000000101111111101100 01111110010101010011110000000101 001001100101001101010011110010010001001001011000

Round: 10 01111110010101010011110000000101 01100001000110110001111110000011 001011110101000101010001100100011101001000101100

Round: 11 01100001000110110001111110000011 00011011001000001000101111101000 000011110100000111011001000100000001111010100100

Round: 12 00011011001000001000101111101000 01110001010100100110001010101110 000111110100000110011001100110000010100010110101

Round: 13 01110001010100100110001010101110 11100110001011100001100100001010 000111110000100110001001001000110110101010010001

Round: 14 11100110001011100001100100001010 00000000101110111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101110111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111101110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3DB67FF8318B453E

After Initial Permutation: 4C9FC7752A9FADA6

Left Half Right Half Sub Key

Round: 1 00101010100111111010110110100110 00101001000110111011100111101101 010100000010110010101100010001000010001111000110

Round: 2 00101001000110111011100111101101 11010011011001110101100110011011 010100001010110010100100010101001010000101000001

Round: 3 11010011011001110101100110011011 01011111001011100011110100001110 110100001010110000100110011000101010010001001100

Round: 4 01011111001011100011110100001110 11110101100001000101001110100100 111000001010011000100110011010001011010110001010

Round: 5 11110101100001000101001110100100 01111101100110110110000010111100 111000001001011000100110001011000101010000101011

Round: 6 01111101100110110110000010111100 10101100000011000101010101011011 111000001001001001110010010011100101100001100010

Round: 7 10101100000011000101010101011011 01110010111110010101010110000101 101001001101001001110010100001001100100101111000

Round: 8 01110010111110010101010110000101 01010001010100010011101001000010 101001100101001101010010100000011001111001010000

Round: 9 01010001010100010011101001000010 10100001000111111010110111011100 001001100101001101010011110010010001001001011000

Round: 10 10100001000111111010110111011100 00100111011110001011000111011110 001011110101000101010001100100011101001000101100

Round: 11 00100111011110001011000111011110 11110101001111010100000000100111 000011110100000111011001000100000001111010100100

Round: 12 11110101001111010100000000100111 00100100011100011010000011110101 000111110100000110011001100110000010100010110101

Round: 13 00100100011100011010000011110101 01110010010011100000110001000010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011100000110001000010 00000000101100111110011101010001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101010001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011100000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 08A628F30CA6438B

After Initial Permutation: 480832C8AA2E95EA

Left Half Right Half Sub Key

Round: 1 10101010001011101001010111101010 00010111001100100000111001011101 010100000010110010101100010001000010001111000110

Round: 2 00010111001100100000111001011101 11111011101011110000101000000011 010100001010110010100100010101001010000101000001

Round: 3 11111011101011110000101000000011 10010111111100010011000111000001 110100001010110000100110011000101010010001001100

Round: 4 10010111111100010011000111000001 01100110101111110110000100011100 111000001010011000100110011010001011010110001010

Round: 5 01100110101111110110000100011100 10000100101000110010101101101100 111000001001011000100110001011000101010000101011

Round: 6 10000100101000110010101101101100 10010111100001011110001011100101 111000001001001001110010010011100101100001100010

Round: 7 10010111100001011110001011100101 10110111000001000011000000000001 101001001101001001110010100001001100100101111000

Round: 8 10110111000001000011000000000001 11001110011100110100001110000111 101001100101001101010010100000011001111001010000

Round: 9 11001110011100110100001110000111 00000011011100110001001010000111 001001100101001101010011110010010001001001011000

Round: 10 00000011011100110001001010000111 10110111111100111110100101100111 001011110101000101010001100100011101001000101100

Round: 11 10110111111100111110100101100111 01001100100110110111001010001011 000011110100000111011001000100000001111010100100

Round: 12 01001100100110110111001010001011 00100100011011001000101101000110 000111110100000110011001100110000010100010110101

Round: 13 00100100011011001000101101000110 01101000111111101000011001101001 000111110000100110001001001000110110101010010001

Round: 14 01101000111111101000011001101001 00000000101100111110011110101000 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110101000 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000011001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: A29562F366F822D3

After Initial Permutation: BCAA128AAB7D20DD

Left Half Right Half Sub Key

Round: 1 10101011011111010010000011011101 10001011010000011010100101001101 010100000010110010101100010001000010001111000110

Round: 2 10001011010000011010100101001101 00110010100100001010111001010100 010100001010110010100100010101001010000101000001

Round: 3 00110010100100001010111001010100 01101101101110010001001011101000 110100001010110000100110011000101010010001001100

Round: 4 01101101101110010001001011101000 11010001010011000101000001000011 111000001010011000100110011010001011010110001010

Round: 5 11010001010011000101000001000011 11011011100101101100010000010100 111000001001011000100110001011000101010000101011

Round: 6 11011011100101101100010000010100 01010000001000111011100111111101 111000001001001001110010010011100101100001100010

Round: 7 01010000001000111011100111111101 01010101001001010011001100110111 101001001101001001110010100001001100100101111000

Round: 8 01010101001001010011001100110111 10111010100110100001010101000001 101001100101001101010010100000011001111001010000

Round: 9 10111010100110100001010101000001 01000101000111011111110010011100 001001100101001101010011110010010001001001011000

Round: 10 01000101000111011111110010011100 11010111010110111110111001110110 001011110101000101010001100100011101001000101100

Round: 11 11010111010110111110111001110110 11000110011011001011100011110010 000011110100000111011001000100000001111010100100

Round: 12 11000110011011001011100011110010 11010000000011100111011010101111 000111110100000110011001100110000010100010110101

Round: 13 11010000000011100111011010101111 11100110001011110001100101001010 000111110000100110001001001000110110101010010001

Round: 14 11100110001011110001100101001010 00000000101000111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101000111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111011110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3DB67FF8318B453E

After Initial Permutation: 4C9FC7752A9FADA6

Left Half Right Half Sub Key

Round: 1 00101010100111111010110110100110 00101001000110111011100111101101 010100000010110010101100010001000010001111000110

Round: 2 00101001000110111011100111101101 11010011011001110101100110011011 010100001010110010100100010101001010000101000001

Round: 3 11010011011001110101100110011011 01011111001011100011110100001110 110100001010110000100110011000101010010001001100

Round: 4 01011111001011100011110100001110 11110101100001000101001110100100 111000001010011000100110011010001011010110001010

Round: 5 11110101100001000101001110100100 01111101100110110110000010111100 111000001001011000100110001011000101010000101011

Round: 6 01111101100110110110000010111100 10101100000011000101010101011011 111000001001001001110010010011100101100001100010

Round: 7 10101100000011000101010101011011 01110010111110010101010110000101 101001001101001001110010100001001100100101111000

Round: 8 01110010111110010101010110000101 01010001010100010011101001000010 101001100101001101010010100000011001111001010000

Round: 9 01010001010100010011101001000010 10100001000111111010110111011100 001001100101001101010011110010010001001001011000

Round: 10 10100001000111111010110111011100 00100111011110001011000111011110 001011110101000101010001100100011101001000101100

Round: 11 00100111011110001011000111011110 11110101001111010100000000100111 000011110100000111011001000100000001111010100100

Round: 12 11110101001111010100000000100111 00100100011100011010000011110101 000111110100000110011001100110000010100010110101

Round: 13 00100100011100011010000011110101 01110010010011100000110001000010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011100000110001000010 00000000101100111110011101010001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101010001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011100000 010100010010110010001100000101110000001111000010

Data Being Encrypted: F59E56E2ECBBF8E0

After Initial Permutation: DD671721FBF9722E

Left Half Right Half Sub Key

Round: 1 11111011111110010111001000101110 10011100010010000010010110100101 010100000010110010101100010001000010001111000110

Round: 2 10011100010010000010010110100101 11111111111110100110110010011101 010100001010110010100100010101001010000101000001

Round: 3 11111111111110100110110010011101 10010001110101010001111001101000 110100001010110000100110011000101010010001001100

Round: 4 10010001110101010001111001101000 01110110000111101111010001111000 111000001010011000100110011010001011010110001010

Round: 5 01110110000111101111010001111000 00001001010110011001000010011001 111000001001011000100110001011000101010000101011

Round: 6 00001001010110011001000010011001 10001000010100001001010000011110 111000001001001001110010010011100101100001100010

Round: 7 10001000010100001001010000011110 11100011100101011010000111111110 101001001101001001110010100001001100100101111000

Round: 8 11100011100101011010000111111110 01110000110110110010010100100111 101001100101001101010010100000011001111001010000

Round: 9 01110000110110110010010100100111 01100111100110100000100110011011 001001100101001101010011110010010001001001011000

Round: 10 01100111100110100000100110011011 11100010100011111110101000100001 001011110101000101010001100100011101001000101100

Round: 11 11100010100011111110101000100001 10110000001010001111100011011100 000011110100000111011001000100000001111010100100

Round: 12 10110000001010001111100011011100 00001100010011101010000111101110 000111110100000110011001100110000010100010110101

Round: 13 00001100010011101010000111101110 01101000111111101000101001101000 000111110000100110001001001000110110101010010001

Round: 14 01101000111111101000101001101000 00000000101100111110011110000010 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110000010 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000110011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 506BF855264CBAD1

After Initial Permutation: AFCD388AC4566652

Left Half Right Half Sub Key

Round: 1 11000100010101100110011001010010 10111001001010100001011011101001 010100000010110010101100010001000010001111000110

Round: 2 10111001001010100001011011101001 01000101001100011100001110110100 010100001010110010100100010101001010000101000001

Round: 3 01000101001100011100001110110100 00111110101101100110101110001000 110100001010110000100110011000101010010001001100

Round: 4 00111110101101100110101110001000 01000011101010010100110000111001 111000001010011000100110011010001011010110001010

Round: 5 01000011101010010100110000111001 11010000110001111101100011010111 111000001001011000100110001011000101010000101011

Round: 6 11010000110001111101100011010111 11100101000010110011011010110001 111000001001001001110010010011100101100001100010

Round: 7 11100101000010110011011010110001 01010011011010100010101011111111 101001001101001001110010100001001100100101111000

Round: 8 01010011011010100010101011111111 01010010101100101110101110100001 101001100101001101010010100000011001111001010000

Round: 9 01010010101100101110101110100001 10101101101001101110000110101001 001001100101001101010011110010010001001001011000

Round: 10 10101101101001101110000110101001 01111000111111001001111111111101 001011110101000101010001100100011101001000101100

Round: 11 01111000111111001001111111111101 00101011010011111001101101000111 000011110100000111011001000100000001111010100100

Round: 12 00101011010011111001101101000111 01100000110110111100110100000111 000111110100000110011001100110000010100010110101

Round: 13 01100000110110111100110100000111 01100110011011100000100101001010 000111110000100110001001001000110110101010010001

Round: 14 01100110011011100000100101001010 00000000100100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000100100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000110111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: CACDC1897A31542B

After Initial Permutation: 577042AE0FB09B91

Left Half Right Half Sub Key

Round: 1 00001111101100001001101110010001 11110000010111100101110101001100 010100000010110010101100010001000010001111000110

Round: 2 11110000010111100101110101001100 10001011110110100000111001010110 010100001010110010100100010101001010000101000001

Round: 3 10001011110110100000111001010110 10011011111000110110111000001111 110100001010110000100110011000101010010001001100

Round: 4 10011011111000110110111000001111 01011010000011110100011001000100 111000001010011000100110011010001011010110001010

Round: 5 01011010000011110100011001000100 01001101011011010011100110111101 111000001001011000100110001011000101010000101011

Round: 6 01001101011011010011100110111101 01011101000011001000110100100000 111000001001001001110010010011100101100001100010

Round: 7 01011101000011001000110100100000 00000111110101101011111110001101 101001001101001001110010100001001100100101111000

Round: 8 00000111110101101011111110001101 01011000001010100011110100110100 101001100101001101010010100000011001111001010000

Round: 9 01011000001010100011110100110100 10101111101000011101001100101011 001001100101001101010011110010010001001001011000

Round: 10 10101111101000011101001100101011 10100001001110100111010101000000 001011110101000101010001100100011101001000101100

Round: 11 10100001001110100111010101000000 01101110111100011111100100100011 000011110100000111011001000100000001111010100100

Round: 12 01101110111100011111100100100011 01101000110011111101000000001100 000111110100000110011001100110000010100010110101

Round: 13 01101000110011111101000000001100 01100010111011001000001001101000 000111110000100110001001001000110110101010010001

Round: 14 01100010111011001000001001101000 00000000101100111110011111111110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011111111110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000001001111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: BA8A7499FFA3F3B4

After Initial Permutation: 54DD9478FBF51B73

Left Half Right Half Sub Key

Round: 1 11111011111101010001101101110011 00101001011001101011000111010110 010100000010110010101100010001000010001111000110

Round: 2 00101001011001101011000111010110 00010011011111011110110010000001 010100001010110010100100010101001010000101000001

Round: 3 00010011011111011110110010000001 01100011101000110000001100111011 110100001010110000100110011000101010010001001100

Round: 4 01100011101000110000001100111011 10010100100101101100010100111011 111000001010011000100110011010001011010110001010

Round: 5 10010100100101101100010100111011 10110000111011000110010010111000 111000001001011000100110001011000101010000101011

Round: 6 10110000111011000110010010111000 00100100000100010011000111011010 111000001001001001110010010011100101100001100010

Round: 7 00100100000100010011000111011010 11110111110100000111110110000010 101001001101001001110010100001001100100101111000

Round: 8 11110111110100000111110110000010 01011000100011010110111111011101 101001100101001101010010100000011001111001010000

Round: 9 01011000100011010110111111011101 10001100111101001101100110101111 001001100101001101010011110010010001001001011000

Round: 10 10001100111101001101100110101111 00101010110011101100001000110011 001011110101000101010001100100011101001000101100

Round: 11 00101010110011101100001000110011 10100000111100001001101101110100 000011110100000111011001000100000001111010100100

Round: 12 10100000111100001001101101110100 11011011111010011101010100101111 000111110100000110011001100110000010100010110101

Round: 13 11011011111010011101010100101111 01100110011011110000100001001110 000111110000100110001001001000110110101010010001

Round: 14 01100110011011110000100001001110 00000000111100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000111100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000101111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 40BCCBB080E2F307

After Initial Permutation: 654A82C47E6A06E4

Left Half Right Half Sub Key

Round: 1 01111110011010100000011011100100 11111111000010010100111100100110 010100000010110010101100010001000010001111000110

Round: 2 11111111000010010100111100100110 11111100100000000111111100110110 010100001010110010100100010101001010000101000001

Round: 3 11111100100000000111111100110110 10010010101110010100111110101100 110100001010110000100110011000101010010001001100

Round: 4 10010010101110010100111110101100 01001101010100111000101110010110 111000001010011000100110011010001011010110001010

Round: 5 01001101010100111000101110010110 10000101001110010011101100100000 111000001001011000100110001011000101010000101011

Round: 6 10000101001110010011101100100000 10000010011110000110100010101110 111000001001001001110010010011100101100001100010

Round: 7 10000010011110000110100010101110 01101001010100111111001100001111 101001001101001001110010100001001100100101111000

Round: 8 01101001010100111111001100001111 00100011100000001100101000010111 101001100101001101010010100000011001111001010000

Round: 9 00100011100000001100101000010111 10110000100110110100011110011001 001001100101001101010011110010010001001001011000

Round: 10 10110000100110110100011110011001 00110001011111111011011001001111 001011110101000101010001100100011101001000101100

Round: 11 00110001011111111011011001001111 11110101101001111010110010100010 000011110100000111011001000100000001111010100100

Round: 12 11110101101001111010110010100010 01110100101100011001001010010011 000111110100000110011001100110000010100010110101

Round: 13 01110100101100011001001010010011 01111000010011000000100001000010 000111110000100110001001001000110110101010010001

Round: 14 01111000010011000000100001000010 00000000101100111110011100111111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100111111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010001110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: ED41F003DE816DA9

After Initial Permutation: 571451EBB5C5D118

Left Half Right Half Sub Key

Round: 1 10110101110001011101000100011000 11101001000001001110010101000111 010100000010110010101100010001000010001111000110

Round: 2 11101001000001001110010101000111 01101011100111101011010001000000 010100001010110010100100010101001010000101000001

Round: 3 01101011100111101011010001000000 00101001011011001101111100101010 110100001010110000100110011000101010010001001100

Round: 4 00101001011011001101111100101010 10110011100101110001100001110001 111000001010011000100110011010001011010110001010

Round: 5 10110011100101110001100001110001 10100011001111100101101111001100 111000001001011000100110001011000101010000101011

Round: 6 10100011001111100101101111001100 10000111001111000001101101010011 111000001001001001110010010011100101100001100010

Round: 7 10000111001111000001101101010011 10000011011010010011001100010000 101001001101001001110010100001001100100101111000

Round: 8 10000011011010010011001100010000 00100011100001110010001010011001 101001100101001101010010100000011001111001010000

Round: 9 00100011100001110010001010011001 11001001111001111000111100001110 001001100101001101010011110010010001001001011000

Round: 10 11001001111001111000111100001110 01111010010011001000010110110111 001011110101000101010001100100011101001000101100

Round: 11 01111010010011001000010110110111 00100000010111011010010010011001 000011110100000111011001000100000001111010100100

Round: 12 00100000010111011010010010011001 00011010001001001101010001101111 000111110100000110011001100110000010100010110101

Round: 13 00011010001001001101010001101111 01100010011001110100100001001110 000111110000100110001001001000110110101010010001

Round: 14 01100010011001110100100001001110 00000000001100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000001100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000011111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: C49E2B2510C8A822

After Initial Permutation: 21120B0C63CC6686

Left Half Right Half Sub Key

Round: 1 01100011110011000110011010000110 00110001000001111100011101001110 010100000010110010101100010001000010001111000110

Round: 2 00110001000001111100011101001110 01000111011010011010000111011111 010100001010110010100100010101001010000101000001

Round: 3 01000111011010011010000111011111 11101001111100111111010010001001 110100001010110000100110011000101010010001001100

Round: 4 11101001111100111111010010001001 11110011111001111011011010011011 111000001010011000100110011010001011010110001010

Round: 5 11110011111001111011011010011011 01111010010100011110011110001100 111000001001011000100110001011000101010000101011

Round: 6 01111010010100011110011110001100 10100001001010101111110000101100 111000001001001001110010010011100101100001100010

Round: 7 10100001001010101111110000101100 01110100101111001111111011011100 101001001101001001110010100001001100100101111000

Round: 8 01110100101111001111111011011100 01110001011110010011010011000101 101001100101001101010010100000011001111001010000

Round: 9 01110001011110010011010011000101 00010100110011010001101010000000 001001100101001101010011110010010001001001011000

Round: 10 00010100110011010001101010000000 00111100110111110110110010111111 001011110101000101010001100100011101001000101100

Round: 11 00111100110111110110110010111111 10001001011010000111101101110001 000011110100000111011001000100000001111010100100

Round: 12 10001001011010000111101101110001 00101100001100001011101111010011 000111110100000110011001100110000010100010110101

Round: 13 00101100001100001011101111010011 01110010010111100000110001000011 000111110000100110001001001000110110101010010001

Round: 14 01110010010111100000110001000011 00000000101100111110011100110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 6C70B5FB415E7865

After Initial Permutation: FB6EA59C0CCF6928

Left Half Right Half Sub Key

Round: 1 00001100110011110110100100101000 10100100100011100010100000010100 010100000010110010101100010001000010001111000110

Round: 2 10100100100011100010100000010100 10110100010100110000011010001101 010100001010110010100100010101001010000101000001

Round: 3 10110100010100110000011010001101 00010110000110001000101110111110 110100001010110000100110011000101010010001001100

Round: 4 00010110000110001000101110111110 00011000010100101101010100010110 111000001010011000100110011010001011010110001010

Round: 5 00011000010100101101010100010110 00010010101000010000101011111000 111000001001011000100110001011000101010000101011

Round: 6 00010010101000010000101011111000 00011011001011001111110001000111 111000001001001001110010010011100101100001100010

Round: 7 00011011001011001111110001000111 00011110000111101100001111101010 101001001101001001110010100001001100100101111000

Round: 8 00011110000111101100001111101010 11110110101110110110001000011101 101001100101001101010010100000011001111001010000

Round: 9 11110110101110110110001000011101 11110101101011011110000100111000 001001100101001101010011110010010001001001011000

Round: 10 11110101101011011110000100111000 10101101011100001010010101011000 001011110101000101010001100100011101001000101100

Round: 11 10101101011100001010010101011000 01100100110010011111100100011010 000011110100000111011001000100000001111010100100

Round: 12 01100100110010011111100100011010 01101010110011111101010001000010 000111110100000110011001100110000010100010110101

Round: 13 01101010110011111101010001000010 01100010111011001000001001001000 000111110000100110001001001000110110101010010001

Round: 14 01100010111011001000001001001000 00000000101100111110011110110000 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110000 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000001 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 56FD4CF48980C8BD

After Initial Permutation: 4F8B8F92FA8AD601

Left Half Right Half Sub Key

Round: 1 11111010100010101101011000000001 11001111000011111110001000011101 010100000010110010101100010001000010001111000110

Round: 2 11001111000011111110001000011101 00011001010111000000001110101011 010100001010110010100100010101001010000101000001

Round: 3 00011001010111000000001110101011 00100000100001111001101010101000 110100001010110000100110011000101010010001001100

Round: 4 00100000100001111001101010101000 11001001101000011110100010100000 111000001010011000100110011010001011010110001010

Round: 5 11001001101000011110100010100000 00001101100001010110100011101011 111000001001011000100110001011000101010000101011

Round: 6 00001101100001010110100011101011 00101101111000111111100010000111 111000001001001001110010010011100101100001100010

Round: 7 00101101111000111111100010000111 10110010000101110011001111100101 101001001101001001110010100001001100100101111000

Round: 8 10110010000101110011001111100101 01011101000000110011000100100001 101001100101001101010010100000011001111001010000

Round: 9 01011101000000110011000100100001 10011010000101111111101010110100 001001100101001101010011110010010001001001011000

Round: 10 10011010000101111111101010110100 01110110111100100010001101001001 001011110101000101010001100100011101001000101100

Round: 11 01110110111100100010001101001001 01011001101001100000111100100001 000011110100000111011001000100000001111010100100

Round: 12 01011001101001100000111100100001 10100011100000101100010110101101 000111110100000110011001100110000010100010110101

Round: 13 10100011100000101100010110101101 11000010011010100001100001001010 000111110000100110001001001000110110101010010001

Round: 14 11000010011010100001100001001010 00000000101100101110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100101110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111100000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: EB4BF26AB9AE4C5A

After Initial Permutation: CF946013353DFBAF

Left Half Right Half Sub Key

Round: 1 00110101001111011111101110101111 01100001011011011010000011110011 010100000010110010101100010001000010001111000110

Round: 2 01100001011011011010000011110011 00100000000101110000010111001110 010100001010110010100100010101001010000101000001

Round: 3 00100000000101110000010111001110 11000111000000000011010100011011 110100001010110000100110011000101010010001001100

Round: 4 11000111000000000011010100011011 01100000110010101111110001010000 111000001010011000100110011010001011010110001010

Round: 5 01100000110010101111110001010000 00010010000100100101011111100010 111000001001011000100110001011000101010000101011

Round: 6 00010010000100100101011111100010 01100000101101001001000011110001 111000001001001001110010010011100101100001100010

Round: 7 01100000101101001001000011110001 10100000001011100110100011110010 101001001101001001110010100001001100100101111000

Round: 8 10100000001011100110100011110010 10010000111011111001001001011110 101001100101001101010010100000011001111001010000

Round: 9 10010000111011111001001001011110 10011110001100100110110011110011 001001100101001101010011110010010001001001011000

Round: 10 10011110001100100110110011110011 01100000011000011110011111010000 001011110101000101010001100100011101001000101100

Round: 11 01100000011000011110011111010000 01101101101011000010100010100000 000011110100000111011001000100000001111010100100

Round: 12 01101101101011000010100010100000 00101000010001111001000001000010 000111110100000110011001100110000010100010110101

Round: 13 00101000010001111001000001000010 01101010111011001000001001101000 000111110000100110001001001000110110101010010001

Round: 14 01101010111011001000001001101000 00000000101100111110011110110010 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110010 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000011 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 1B5C2F6913B67AE8

After Initial Permutation: CA73261DA0ECCF75

Left Half Right Half Sub Key

Round: 1 10100000111011001100111101110101 11001111000001101000001010111001 010100000010110010101100010001000010001111000110

Round: 2 11001111000001101000001010111001 01101111011011010011001010110111 010100001010110010100100010101001010000101000001

Round: 3 01101111011011010011001010110111 11111110101110001101001111000110 110100001010110000100110011000101010010001001100

Round: 4 11111110101110001101001111000110 11000111010100001010001010011100 111000001010011000100110011010001011010110001010

Round: 5 11000111010100001010001010011100 00010001000110101000101111000011 111000001001011000100110001011000101010000101011

Round: 6 00010001000110101000101111000011 01101100100111110111110000000111 111000001001001001110010010011100101100001100010

Round: 7 01101100100111110111110000000111 00111111101001011100011100010110 101001001101001001110010100001001100100101111000

Round: 8 00111111101001011100011100010110 11110001010011010111110111000011 101001100101001101010010100000011001111001010000

Round: 9 11110001010011010111110111000011 01000101000101101000110100001101 001001100101001101010011110010010001001001011000

Round: 10 01000101000101101000110100001101 00011100010010110011000000011011 001011110101000101010001100100011101001000101100

Round: 11 00011100010010110011000000011011 10000101000011000100010001000011 000011110100000111011001000100000001111010100100

Round: 12 10000101000011000100010001000011 00100011010100010100001110101111 000111110100000110011001100110000010100010110101

Round: 13 00100011010100010100001110101111 11100010011011100001100000001010 000111110000100110001001001000110110101010010001

Round: 14 11100010011011100001100000001010 00000000101100011110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100011110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111010000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3A4287419F5D19CF

After Initial Permutation: AA71B4FC9401F197

Left Half Right Half Sub Key

Round: 1 10010100000000011111000110010111 01100100101101011101000011111100 010100000010110010101100010001000010001111000110

Round: 2 01100100101101011101000011111100 10011110111110000010011110011100 010100001010110010100100010101001010000101000001

Round: 3 10011110111110000010011110011100 00011110011010010101010001001001 110100001010110000100110011000101010010001001100

Round: 4 00011110011010010101010001001001 11000000000110101100100001111101 111000001010011000100110011010001011010110001010

Round: 5 11000000000110101100100001111101 10101110101000011110100011010010 111000001001011000100110001011000101010000101011

Round: 6 10101110101000011110100011010010 10000011100110100001000110111101 111000001001001001110010010011100101100001100010

Round: 7 10000011100110100001000110111101 10000111100110101110000101011011 101001001101001001110010100001001100100101111000

Round: 8 10000111100110101110000101011011 10001110000010110011101110001001 101001100101001101010010100000011001111001010000

Round: 9 10001110000010110011101110001001 10001000111011010101110000111100 001001100101001101010011110010010001001001011000

Round: 10 10001000111011010101110000111100 10001111000110100110000001010011 001011110101000101010001100100011101001000101100

Round: 11 10001111000110100110000001010011 01000100000100001101011110011000 000011110100000111011001000100000001111010100100

Round: 12 01000100000100001101011110011000 01110101100111011011011001110000 000111110100000110011001100110000010100010110101

Round: 13 01110101100111011011011001110000 01111010010011000000010001100010 000111110000100110001001001000110110101010010001

Round: 14 01111010010011000000010001100010 00000000101100111110011101001101 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001101 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111100 010100010010110010001100000101110000001111000010

Data Being Encrypted: D8737A96B6FC722F

After Initial Permutation: 677FB88239F6A5DE

Left Half Right Half Sub Key

Round: 1 00111001111101101010010111011110 11001011001000100111111110010110 010100000010110010101100010001000010001111000110

Round: 2 11001011001000100111111110010110 00010100011111011000010101010011 010100001010110010100100010101001010000101000001

Round: 3 00010100011111011000010101010011 11000011111100101100000011010111 110100001010110000100110011000101010010001001100

Round: 4 11000011111100101100000011010111 10011001100101010011000001001100 111000001010011000100110011010001011010110001010

Round: 5 10011001100101010011000001001100 10011011110000000001001001101011 111000001001011000100110001011000101010000101011

Round: 6 10011011110000000001001001101011 00110011001011001111011101111111 111000001001001001110010010011100101100001100010

Round: 7 00110011001011001111011101111111 10100111111000010001101111100000 101001001101001001110010100001001100100101111000

Round: 8 10100111111000010001101111100000 00010011001010011100010101100101 101001100101001101010010100000011001111001010000

Round: 9 00010011001010011100010101100101 00000100111111010110100010110000 001001100101001101010011110010010001001001011000

Round: 10 00000100111111010110100010110000 00110100000100000110110111000001 001011110101000101010001100100011101001000101100

Round: 11 00110100000100000110110111000001 00100101100101101010011010001010 000011110100000111011001000100000001111010100100

Round: 12 00100101100101101010011010001010 10101010010001111001010000000110 000111110100000110011001100110000010100010110101

Round: 13 10101010010001111001010000000110 01101010111011101000001001001000 000111110000100110001001001000110110101010010001

Round: 14 01101010111011101000001001001000 00000000101100111110011110110110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 62E508F8BD074F5D

After Initial Permutation: CB98F2F21A1BDC61

Left Half Right Half Sub Key

Round: 1 00011010000110111101110001100001 00010010010101010000100001010010 010100000010110010101100010001000010001111000110

Round: 2 00010010010101010000100001010010 01100100100011000111010011110010 010100001010110010100100010101001010000101000001

Round: 3 01100100100011000111010011110010 00000111101100001110111101000101 110100001010110000100110011000101010010001001100

Round: 4 00000111101100001110111101000101 01001011101000100010001000010011 111000001010011000100110011010001011010110001010

Round: 5 01001011101000100010001000010011 00010001010110001101010110101111 111000001001011000100110001011000101010000101011

Round: 6 00010001010110001101010110101111 01111110001010001111110001000100 111000001001001001110010010011100101100001100010

Round: 7 01111110001010001111110001000100 11010001101001000000010010011001 101001001101001001110010100001001100100101111000

Round: 8 11010001101001000000010010011001 00000011110000101111101100011011 101001100101001101010010100000011001111001010000

Round: 9 00000011110000101111101100011011 10100001000011011001101101001100 001001100101001101010011110010010001001001011000

Round: 10 10100001000011011001101101001100 01110011100011000101100001000010 001011110101000101010001100100011101001000101100

Round: 11 01110011100011000101100001000010 00010110010010000111000100000110 000011110100000111011001000100000001111010100100

Round: 12 00010110010010000111000100000110 00100011010001100100011010101111 000111110100000110011001100110000010100010110101

Round: 13 00100011010001100100011010101111 11100010001011100001100001001010 000111110000100110001001001000110110101010010001

Round: 14 11100010001011100001100001001010 00000000101101111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101101111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111110110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: C49E2B2510C8A822

After Initial Permutation: 21120B0C63CC6686

Left Half Right Half Sub Key

Round: 1 01100011110011000110011010000110 00110001000001111100011101001110 010100000010110010101100010001000010001111000110

Round: 2 00110001000001111100011101001110 01000111011010011010000111011111 010100001010110010100100010101001010000101000001

Round: 3 01000111011010011010000111011111 11101001111100111111010010001001 110100001010110000100110011000101010010001001100

Round: 4 11101001111100111111010010001001 11110011111001111011011010011011 111000001010011000100110011010001011010110001010

Round: 5 11110011111001111011011010011011 01111010010100011110011110001100 111000001001011000100110001011000101010000101011

Round: 6 01111010010100011110011110001100 10100001001010101111110000101100 111000001001001001110010010011100101100001100010

Round: 7 10100001001010101111110000101100 01110100101111001111111011011100 101001001101001001110010100001001100100101111000

Round: 8 01110100101111001111111011011100 01110001011110010011010011000101 101001100101001101010010100000011001111001010000

Round: 9 01110001011110010011010011000101 00010100110011010001101010000000 001001100101001101010011110010010001001001011000

Round: 10 00010100110011010001101010000000 00111100110111110110110010111111 001011110101000101010001100100011101001000101100

Round: 11 00111100110111110110110010111111 10001001011010000111101101110001 000011110100000111011001000100000001111010100100

Round: 12 10001001011010000111101101110001 00101100001100001011101111010011 000111110100000110011001100110000010100010110101

Round: 13 00101100001100001011101111010011 01110010010111100000110001000011 000111110000100110001001001000110110101010010001

Round: 14 01110010010111100000110001000011 00000000101100111110011100110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 6F5C020214E45C09

After Initial Permutation: 635273812021C30D

Left Half Right Half Sub Key

Round: 1 00100000001000011100001100001101 10010011101001111011110010110010 010100000010110010101100010001000010001111000110

Round: 2 10010011101001111011110010110010 01000001000100000010100001010000 010100001010110010100100010101001010000101000001

Round: 3 01000001000100000010100001010000 00001001000100111110110111001111 110100001010110000100110011000101010010001001100

Round: 4 00001001000100111110110111001111 10010111101110000001110100101000 111000001010011000100110011010001011010110001010

Round: 5 10010111101110000001110100101000 00001010110011100000100110101111 111000001001011000100110001011000101010000101011

Round: 6 00001010110011100000100110101111 00000111111100100111000011110011 111000001001001001110010010011100101100001100010

Round: 7 00000111111100100111000011110011 11110101011110010111010110001101 101001001101001001110010100001001100100101111000

Round: 8 11110101011110010111010110001101 11011110001111011101101001001111 101001100101001101010010100000011001111001010000

Round: 9 11011110001111011101101001001111 10000000100110010101001111110000 001001100101001101010011110010010001001001011000

Round: 10 10000000100110010101001111110000 00111100111010001010110011000110 001011110101000101010001100100011101001000101100

Round: 11 00111100111010001010110011000110 00110000011010101010011010100011 000011110100000111011001000100000001111010100100

Round: 12 00110000011010101010011010100011 01100000111011010101101001000100 000111110100000110011001100110000010100010110101

Round: 13 01100000111011010101101001000100 01100010111011001000011001101001 000111110000100110001001001000110110101010010001

Round: 14 01100010111011001000011001101001 00000000101100111110011110111110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110111110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000001111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 41923D788D894B54

After Initial Permutation: C98E9475320C7C42

Left Half Right Half Sub Key

Round: 1 00110010000011000111110001000010 10011110000111111011001110000001 010100000010110010101100010001000010001111000110

Round: 2 10011110000111111011001110000001 00101010001110010010001011101000 010100001010110010100100010101001010000101000001

Round: 3 00101010001110010010001011101000 11010011111101000100110001101011 110100001010110000100110011000101010010001001100

Round: 4 11010011111101000100110001101011 11101111010101011000000101001101 111000001010011000100110011010001011010110001010

Round: 5 11101111010101011000000101001101 01100100011100100100111011110110 111000001001011000100110001011000101010000101011

Round: 6 01100100011100100100111011110110 10001000000100111010010101100010 111000001001001001110010010011100101100001100010

Round: 7 10001000000100111010010101100010 00110011100110100101101110011101 101001001101001001110010100001001100100101111000

Round: 8 00110011100110100101101110011101 10000111010000000101111111101100 101001100101001101010010100000011001111001010000

Round: 9 10000111010000000101111111101100 01111110010101010011110000000101 001001100101001101010011110010010001001001011000

Round: 10 01111110010101010011110000000101 01100001000110110001111110000011 001011110101000101010001100100011101001000101100

Round: 11 01100001000110110001111110000011 00011011001000001000101111101000 000011110100000111011001000100000001111010100100

Round: 12 00011011001000001000101111101000 01110001010100100110001010101110 000111110100000110011001100110000010100010110101

Round: 13 01110001010100100110001010101110 11100110001011100001100100001010 000111110000100110001001001000110110101010010001

Round: 14 11100110001011100001100100001010 00000000101110111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101110111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111101110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: AB98AD28432B3E4F

After Initial Permutation: 9042C4B5076DEFF1

Left Half Right Half Sub Key

Round: 1 00000111011011011110111111110001 10000110111001001001110001000110 010100000010110010101100010001000010001111000110

Round: 2 10000110111001001001110001000110 10110111101011110000011100100000 010100001010110010100100010101001010000101000001

Round: 3 10110111101011110000011100100000 01111100100010011110011111000000 110100001010110000100110011000101010010001001100

Round: 4 01111100100010011110011111000000 11111010100100110101010101011101 111000001010011000100110011010001011010110001010

Round: 5 11111010100100110101010101011101 00011101111110001011110000000010 111000001001011000100110001011000101010000101011

Round: 6 00011101111110001011110000000010 10111100001010001100111100100101 111000001001001001110010010011100101100001100010

Round: 7 10111100001010001100111100100101 10101111100001100000000100101100 101001001101001001110010100001001100100101111000

Round: 8 10101111100001100000000100101100 01011111001110001010001101100001 101001100101001101010010100000011001111001010000

Round: 9 01011111001110001010001101100001 00110000110110111101100001101000 001001100101001101010011110010010001001001011000

Round: 10 00110000110110111101100001101000 11000011010000010100100000110010 001011110101000101010001100100011101001000101100

Round: 11 11000011010000010100100000110010 11011100100100110110100010111001 000011110100000111011001000100000001111010100100

Round: 12 11011100100100110110100010111001 01100100101100011011011010000100 000111110100000110011001100110000010100010110101

Round: 13 01100100101100011011011010000100 01111000010011000000110001100010 000111110000100110001001001000110110101010010001

Round: 14 01111000010011000000110001100010 00000000101100111110011100100001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100100001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010010000 010100010010110010001100000101110000001111000010

Data Being Encrypted: BE9D9923F2E00FCC

After Initial Permutation: B017C34EB739C759

Left Half Right Half Sub Key

Round: 1 10110111001110011100011101011001 11011110011100001101111100100101 010100000010110010101100010001000010001111000110

Round: 2 11011110011100001101111100100101 00000100001110100001110000111101 010100001010110010100100010101001010000101000001

Round: 3 00000100001110100001110000111101 10111010110100011000111001000101 110100001010110000100110011000101010010001001100

Round: 4 10111010110100011000111001000101 10010101111010111001111111101011 111000001010011000100110011010001011010110001010

Round: 5 10010101111010111001111111101011 10000111100001101100000010010111 111000001001011000100110001011000101010000101011

Round: 6 10000111100001101100000010010111 10000000011111011101010100110100 111000001001001001110010010011100101100001100010

Round: 7 10000000011111011101010100110100 01101010111101100010110011101000 101001001101001001110010100001001100100101111000

Round: 8 01101010111101100010110011101000 10110011101111110010010001000111 101001100101001101010010100000011001111001010000

Round: 9 10110011101111110010010001000111 11101000000100000111110111100101 001001100101001101010011110010010001001001011000

Round: 10 11101000000100000111110111100101 11111010110101101100001001101111 001011110101000101010001100100011101001000101100

Round: 11 11111010110101101100001001101111 00001010000001101111100000001101 000011110100000111011001000100000001111010100100

Round: 12 00001010000001101111100000001101 00010110010011001010111111001000 000111110100000110011001100110000010100010110101

Round: 13 00010110010011001010111111001000 01101000111111101000111001001001 000111110000100110001001001000110110101010010001

Round: 14 01101000111111101000111001001001 00000000101100111110011110101110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110101110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000011111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: A29562F366F822D3

After Initial Permutation: BCAA128AAB7D20DD

Left Half Right Half Sub Key

Round: 1 10101011011111010010000011011101 10001011010000011010100101001101 010100000010110010101100010001000010001111000110

Round: 2 10001011010000011010100101001101 00110010100100001010111001010100 010100001010110010100100010101001010000101000001

Round: 3 00110010100100001010111001010100 01101101101110010001001011101000 110100001010110000100110011000101010010001001100

Round: 4 01101101101110010001001011101000 11010001010011000101000001000011 111000001010011000100110011010001011010110001010

Round: 5 11010001010011000101000001000011 11011011100101101100010000010100 111000001001011000100110001011000101010000101011

Round: 6 11011011100101101100010000010100 01010000001000111011100111111101 111000001001001001110010010011100101100001100010

Round: 7 01010000001000111011100111111101 01010101001001010011001100110111 101001001101001001110010100001001100100101111000

Round: 8 01010101001001010011001100110111 10111010100110100001010101000001 101001100101001101010010100000011001111001010000

Round: 9 10111010100110100001010101000001 01000101000111011111110010011100 001001100101001101010011110010010001001001011000

Round: 10 01000101000111011111110010011100 11010111010110111110111001110110 001011110101000101010001100100011101001000101100

Round: 11 11010111010110111110111001110110 11000110011011001011100011110010 000011110100000111011001000100000001111010100100

Round: 12 11000110011011001011100011110010 11010000000011100111011010101111 000111110100000110011001100110000010100010110101

Round: 13 11010000000011100111011010101111 11100110001011110001100101001010 000111110000100110001001001000110110101010010001

Round: 14 11100110001011110001100101001010 00000000101000111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101000111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111011110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E0FA46A7086AEB7C

After Initial Permutation: E7828C484BEBF26E

Left Half Right Half Sub Key

Round: 1 01001011111010111111001001101110 11100101111001001010001100111111 010100000010110010101100010001000010001111000110

Round: 2 11100101111001001010001100111111 10111101000011001111110000111111 010100001010110010100100010101001010000101000001

Round: 3 10111101000011001111110000111111 10101001110001110010001101001001 110100001010110000100110011000101010010001001100

Round: 4 10101001110001110010001101001001 00011101101000100100110110110111 111000001010011000100110011010001011010110001010

Round: 5 00011101101000100100110110110111 11000110000010011011000100111000 111000001001011000100110001011000101010000101011

Round: 6 11000110000010011011000100111000 00111100110010011011110010010000 111000001001001001110010010011100101100001100010

Round: 7 00111100110010011011110010010000 00011110101010111100111101110111 101001001101001001110010100001001100100101111000

Round: 8 00011110101010111100111101110111 00010000100001010000011101101101 101001100101001101010010100000011001111001010000

Round: 9 00010000100001010000011101101101 10000000110000001100010010011010 001001100101001101010011110010010001001001011000

Round: 10 10000000110000001100010010011010 01010001000001110101110111000000 001011110101000101010001100100011101001000101100

Round: 11 01010001000001110101110111000000 11011000011011110010100001001110 000011110100000111011001000100000001111010100100

Round: 12 11011000011011110010100001001110 11001100100001101110000111101000 000111110100000110011001100110000010100010110101

Round: 13 11001100100001101110000111101000 01100000111111001000101001101000 000111110000100110001001001000110110101010010001

Round: 14 01100000111111001000101001101000 00000000101100111110011110000110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110000110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000110111 010100010010110010001100000101110000001111000010

Data Being Encrypted: D8737A96B6FC722F

After Initial Permutation: 677FB88239F6A5DE

Left Half Right Half Sub Key

Round: 1 00111001111101101010010111011110 11001011001000100111111110010110 010100000010110010101100010001000010001111000110

Round: 2 11001011001000100111111110010110 00010100011111011000010101010011 010100001010110010100100010101001010000101000001

Round: 3 00010100011111011000010101010011 11000011111100101100000011010111 110100001010110000100110011000101010010001001100

Round: 4 11000011111100101100000011010111 10011001100101010011000001001100 111000001010011000100110011010001011010110001010

Round: 5 10011001100101010011000001001100 10011011110000000001001001101011 111000001001011000100110001011000101010000101011

Round: 6 10011011110000000001001001101011 00110011001011001111011101111111 111000001001001001110010010011100101100001100010

Round: 7 00110011001011001111011101111111 10100111111000010001101111100000 101001001101001001110010100001001100100101111000

Round: 8 10100111111000010001101111100000 00010011001010011100010101100101 101001100101001101010010100000011001111001010000

Round: 9 00010011001010011100010101100101 00000100111111010110100010110000 001001100101001101010011110010010001001001011000

Round: 10 00000100111111010110100010110000 00110100000100000110110111000001 001011110101000101010001100100011101001000101100

Round: 11 00110100000100000110110111000001 00100101100101101010011010001010 000011110100000111011001000100000001111010100100

Round: 12 00100101100101101010011010001010 10101010010001111001010000000110 000111110100000110011001100110000010100010110101

Round: 13 10101010010001111001010000000110 01101010111011101000001001001000 000111110000100110001001001000110110101010010001

Round: 14 01101010111011101000001001001000 00000000101100111110011110110110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 506BF855264CBAD1

After Initial Permutation: AFCD388AC4566652

Left Half Right Half Sub Key

Round: 1 11000100010101100110011001010010 10111001001010100001011011101001 010100000010110010101100010001000010001111000110

Round: 2 10111001001010100001011011101001 01000101001100011100001110110100 010100001010110010100100010101001010000101000001

Round: 3 01000101001100011100001110110100 00111110101101100110101110001000 110100001010110000100110011000101010010001001100

Round: 4 00111110101101100110101110001000 01000011101010010100110000111001 111000001010011000100110011010001011010110001010

Round: 5 01000011101010010100110000111001 11010000110001111101100011010111 111000001001011000100110001011000101010000101011

Round: 6 11010000110001111101100011010111 11100101000010110011011010110001 111000001001001001110010010011100101100001100010

Round: 7 11100101000010110011011010110001 01010011011010100010101011111111 101001001101001001110010100001001100100101111000

Round: 8 01010011011010100010101011111111 01010010101100101110101110100001 101001100101001101010010100000011001111001010000

Round: 9 01010010101100101110101110100001 10101101101001101110000110101001 001001100101001101010011110010010001001001011000

Round: 10 10101101101001101110000110101001 01111000111111001001111111111101 001011110101000101010001100100011101001000101100

Round: 11 01111000111111001001111111111101 00101011010011111001101101000111 000011110100000111011001000100000001111010100100

Round: 12 00101011010011111001101101000111 01100000110110111100110100000111 000111110100000110011001100110000010100010110101

Round: 13 01100000110110111100110100000111 01100110011011100000100101001010 000111110000100110001001001000110110101010010001

Round: 14 01100110011011100000100101001010 00000000100100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000100100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000110111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: F8117AEDC1D324CF

After Initial Permutation: BD27C8BAB94D8DA4

Left Half Right Half Sub Key

Round: 1 10111001010011011000110110100100 10111000101000010111011111110100 010100000010110010101100010001000010001111000110

Round: 2 10111000101000010111011111110100 10100110100100011000011011000100 010100001010110010100100010101001010000101000001

Round: 3 10100110100100011000011011000100 00101100001110010000000010111000 110100001010110000100110011000101010010001001100

Round: 4 00101100001110010000000010111000 01100001111110110011001001001100 111000001010011000100110011010001011010110001010

Round: 5 01100001111110110011001001001100 00100000001000010010001101100100 111000001001011000100110001011000101010000101011

Round: 6 00100000001000010010001101100100 01101111100001001011011000111000 111000001001001001110010010011100101100001100010

Round: 7 01101111100001001011011000111000 10011001010000000000011000010011 101001001101001001110010100001001100100101111000

Round: 8 10011001010000000000011000010011 10000000011011111000110100111001 101001100101001101010010100000011001111001010000

Round: 9 10000000011011111000110100111001 11101011111011000010111100011101 001001100101001101010011110010010001001001011000

Round: 10 11101011111011000010111100011101 00111000001111010010001101010100 001011110101000101010001100100011101001000101100

Round: 11 00111000001111010010001101010100 11000100010011111000011100111110 000011110100000111011001000100000001111010100100

Round: 12 11000100010011111000011100111110 01100010001010111111011100111001 000111110100000110011001100110000010100010110101

Round: 13 01100010001010111111011100111001 01101010011011000000110001001011 000111110000100110001001001000110110101010010001

Round: 14 01101010011011000000110001001011 00000000101100111110011110111111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110111111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000001110 010100010010110010001100000101110000001111000010

Data Being Encrypted: F7B6C9FACA9A4147

After Initial Permutation: DD2B83C53F0B3CBB

Left Half Right Half Sub Key

Round: 1 00111111000010110011110010111011 11010111100100011111000000011111 010100000010110010101100010001000010001111000110

Round: 2 11010111100100011111000000011111 01111100000100011011000101101101 010100001010110010100100010101001010000101000001

Round: 3 01111100000100011011000101101101 00111001100110100010000111011111 110100001010110000100110011000101010010001001100

Round: 4 00111001100110100010000111011111 01010001010010000101110111011100 111000001010011000100110011010001011010110001010

Round: 5 01010001010010000101110111011100 00111101011100011111110101100001 111000001001011000100110001011000101010000101011

Round: 6 00111101011100011111110101100001 01010011100111011101001111001000 111000001001001001110010010011100101100001100010

Round: 7 01010011100111011101001111001000 11001110001100001001010000011000 101001001101001001110010100001001100100101111000

Round: 8 11001110001100001001010000011000 11010011101110001101000111100010 101001100101001101010010100000011001111001010000

Round: 9 11010011101110001101000111100010 01111100111100101110001111110111 001001100101001101010011110010010001001001011000

Round: 10 01111100111100101110001111110111 11101001101001111100010010011101 001011110101000101010001100100011101001000101100

Round: 11 11101001101001111100010010011101 01101111101001100110010101111000 000011110100000111011001000100000001111010100100

Round: 12 01101111101001100110010101111000 01100100111110011010011011100010 000111110100000110011001100110000010100010110101

Round: 13 01100100111110011010011011100010 01111010010011100000110001100010 000111110000100110001001001000110110101010010001

Round: 14 01111010010011100000110001100010 00000000101100111110011101010111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101010111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011100110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 6F5C020214E45C09

After Initial Permutation: 635273812021C30D

Left Half Right Half Sub Key

Round: 1 00100000001000011100001100001101 10010011101001111011110010110010 010100000010110010101100010001000010001111000110

Round: 2 10010011101001111011110010110010 01000001000100000010100001010000 010100001010110010100100010101001010000101000001

Round: 3 01000001000100000010100001010000 00001001000100111110110111001111 110100001010110000100110011000101010010001001100

Round: 4 00001001000100111110110111001111 10010111101110000001110100101000 111000001010011000100110011010001011010110001010

Round: 5 10010111101110000001110100101000 00001010110011100000100110101111 111000001001011000100110001011000101010000101011

Round: 6 00001010110011100000100110101111 00000111111100100111000011110011 111000001001001001110010010011100101100001100010

Round: 7 00000111111100100111000011110011 11110101011110010111010110001101 101001001101001001110010100001001100100101111000

Round: 8 11110101011110010111010110001101 11011110001111011101101001001111 101001100101001101010010100000011001111001010000

Round: 9 11011110001111011101101001001111 10000000100110010101001111110000 001001100101001101010011110010010001001001011000

Round: 10 10000000100110010101001111110000 00111100111010001010110011000110 001011110101000101010001100100011101001000101100

Round: 11 00111100111010001010110011000110 00110000011010101010011010100011 000011110100000111011001000100000001111010100100

Round: 12 00110000011010101010011010100011 01100000111011010101101001000100 000111110100000110011001100110000010100010110101

Round: 13 01100000111011010101101001000100 01100010111011001000011001101001 000111110000100110001001001000110110101010010001

Round: 14 01100010111011001000011001101001 00000000101100111110011110111110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110111110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000001111 010100010010110010001100000101110000001111000010

Data Being Encrypted: BA8A7499FFA3F3B4

After Initial Permutation: 54DD9478FBF51B73

Left Half Right Half Sub Key

Round: 1 11111011111101010001101101110011 00101001011001101011000111010110 010100000010110010101100010001000010001111000110

Round: 2 00101001011001101011000111010110 00010011011111011110110010000001 010100001010110010100100010101001010000101000001

Round: 3 00010011011111011110110010000001 01100011101000110000001100111011 110100001010110000100110011000101010010001001100

Round: 4 01100011101000110000001100111011 10010100100101101100010100111011 111000001010011000100110011010001011010110001010

Round: 5 10010100100101101100010100111011 10110000111011000110010010111000 111000001001011000100110001011000101010000101011

Round: 6 10110000111011000110010010111000 00100100000100010011000111011010 111000001001001001110010010011100101100001100010

Round: 7 00100100000100010011000111011010 11110111110100000111110110000010 101001001101001001110010100001001100100101111000

Round: 8 11110111110100000111110110000010 01011000100011010110111111011101 101001100101001101010010100000011001111001010000

Round: 9 01011000100011010110111111011101 10001100111101001101100110101111 001001100101001101010011110010010001001001011000

Round: 10 10001100111101001101100110101111 00101010110011101100001000110011 001011110101000101010001100100011101001000101100

Round: 11 00101010110011101100001000110011 10100000111100001001101101110100 000011110100000111011001000100000001111010100100

Round: 12 10100000111100001001101101110100 11011011111010011101010100101111 000111110100000110011001100110000010100010110101

Round: 13 11011011111010011101010100101111 01100110011011110000100001001110 000111110000100110001001001000110110101010010001

Round: 14 01100110011011110000100001001110 00000000111100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000111100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000101111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 04E079D6B2553B5D

After Initial Permutation: AEFCA9E41A56C458

Left Half Right Half Sub Key

Round: 1 00011010010101101100010001011000 01101011001101111100111111000110 010100000010110010101100010001000010001111000110

Round: 2 01101011001101111100111111000110 10000001001111011101111100111001 010100001010110010100100010101001010000101000001

Round: 3 10000001001111011101111100111001 01001000010101010001000110111101 110100001010110000100110011000101010010001001100

Round: 4 01001000010101010001000110111101 00111100111110111110110101110110 111000001010011000100110011010001011010110001010

Round: 5 00111100111110111110110101110110 11111001111111001000001011110100 111000001001011000100110001011000101010000101011

Round: 6 11111001111111001000001011110100 01001010100110001010000110000111 111000001001001001110010010011100101100001100010

Round: 7 01001010100110001010000110000111 11000100100110111010101000110010 101001001101001001110010100001001100100101111000

Round: 8 11000100100110111010101000110010 11001011000101101110011011111110 101001100101001101010010100000011001111001010000

Round: 9 11001011000101101110011011111110 10001010011010100001100001100101 001001100101001101010011110010010001001001011000

Round: 10 10001010011010100001100001100101 10010101001101100100011101001100 001011110101000101010001100100011101001000101100

Round: 11 10010101001101100100011101001100 00101101001100111010011000001000 000011110100000111011001000100000001111010100100

Round: 12 00101101001100111010011000001000 00110001000001111111100110100001 000111110100000110011001100110000010100010110101

Round: 13 00110001000001111111100110100001 01101000011011000000010001101010 000111110000100110001001001000110110101010010001

Round: 14 01101000011011000000010001101010 00000000101100111110011110001101 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110001101 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000111100 010100010010110010001100000101110000001111000010

Data Being Encrypted: DF35060B91294550

After Initial Permutation: C193477B1122290D

Left Half Right Half Sub Key

Round: 1 00010001001000100010100100001101 11010101101000101000100111000100 010100000010110010101100010001000010001111000110

Round: 2 11010101101000101000100111000100 00010011010001110001100010101000 010100001010110010100100010101001010000101000001

Round: 3 00010011010001110001100010101000 10101000000101000010010110101011 110100001010110000100110011000101010010001001100

Round: 4 10101000000101000010010110101011 10100010100101101001110000001000 111000001010011000100110011010001011010110001010

Round: 5 10100010100101101001110000001000 01111010010111011100001010000010 111000001001011000100110001011000101010000101011

Round: 6 01111010010111011100001010000010 11110100011111011100001100111110 111000001001001001110010010011100101100001100010

Round: 7 11110100011111011100001100111110 10100101101000010010011001100110 101001001101001001110010100001001100100101111000

Round: 8 10100101101000010010011001100110 11010011010110111011010010011001 101001100101001101010010100000011001111001010000

Round: 9 11010011010110111011010010011001 10000010100011011100100111111110 001001100101001101010011110010010001001001011000

Round: 10 10000010100011011100100111111110 10101110100111111011101111101100 001011110101000101010001100100011101001000101100

Round: 11 10101110100111111011101111101100 11110010100111001110010111010100 000011110100000111011001000100000001111010100100

Round: 12 11110010100111001110010111010100 00111101000101001111111100111100 000111110100000110011001100110000010100010110101

Round: 13 00111101000101001111111100111100 01110000010111100000010001100011 000111110000100110001001001000110110101010010001

Round: 14 01110000010111100000010001100011 00000000101100111110011101000111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101000111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011110110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 068FEBDB31F66D71

After Initial Permutation: ECB863DE2EF44E2F

Left Half Right Half Sub Key

Round: 1 00101110111101000100111000101111 00010001101100001110001100100000 010100000010110010101100010001000010001111000110

Round: 2 00010001101100001110001100100000 11111000010111001001111101001101 010100001010110010100100010101001010000101000001

Round: 3 11111000010111001001111101001101 10010001010101111010010110001101 110100001010110000100110011000101010010001001100

Round: 4 10010001010101111010010110001101 10100110010011111101000001111010 111000001010011000100110011010001011010110001010

Round: 5 10100110010011111101000001111010 00001000001110110110101000100000 111000001001011000100110001011000101010000101011

Round: 6 00001000001110110110101000100000 11010110010011110011010100000110 111000001001001001110010010011100101100001100010

Round: 7 11010110010011110011010100000110 11001101110011000100100100111101 101001001101001001110010100001001100100101111000

Round: 8 11001101110011000100100100111101 00000110101100111100101101011001 101001100101001101010010100000011001111001010000

Round: 9 00000110101100111100101101011001 00100001010101101111001010110000 001001100101001101010011110010010001001001011000

Round: 10 00100001010101101111001010110000 11110100101010111110001010101111 001011110101000101010001100100011101001000101100

Round: 11 11110100101010111110001010101111 00010000010000001101011010010110 000011110100000111011001000100000001111010100100

Round: 12 00010000010000001101011010010110 10011010010011111011010010101110 000111110100000110011001100110000010100010110101

Round: 13 10011010010011111011010010101110 01101000111011101000111001001000 000111110000100110001001001000110110101010010001

Round: 14 01101000111011101000111001001000 00000000101100111110011110001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: ED41F003DE816DA9

After Initial Permutation: 571451EBB5C5D118

Left Half Right Half Sub Key

Round: 1 10110101110001011101000100011000 11101001000001001110010101000111 010100000010110010101100010001000010001111000110

Round: 2 11101001000001001110010101000111 01101011100111101011010001000000 010100001010110010100100010101001010000101000001

Round: 3 01101011100111101011010001000000 00101001011011001101111100101010 110100001010110000100110011000101010010001001100

Round: 4 00101001011011001101111100101010 10110011100101110001100001110001 111000001010011000100110011010001011010110001010

Round: 5 10110011100101110001100001110001 10100011001111100101101111001100 111000001001011000100110001011000101010000101011

Round: 6 10100011001111100101101111001100 10000111001111000001101101010011 111000001001001001110010010011100101100001100010

Round: 7 10000111001111000001101101010011 10000011011010010011001100010000 101001001101001001110010100001001100100101111000

Round: 8 10000011011010010011001100010000 00100011100001110010001010011001 101001100101001101010010100000011001111001010000

Round: 9 00100011100001110010001010011001 11001001111001111000111100001110 001001100101001101010011110010010001001001011000

Round: 10 11001001111001111000111100001110 01111010010011001000010110110111 001011110101000101010001100100011101001000101100

Round: 11 01111010010011001000010110110111 00100000010111011010010010011001 000011110100000111011001000100000001111010100100

Round: 12 00100000010111011010010010011001 00011010001001001101010001101111 000111110100000110011001100110000010100010110101

Round: 13 00011010001001001101010001101111 01100010011001110100100001001110 000111110000100110001001001000110110101010010001

Round: 14 01100010011001110100100001001110 00000000001100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000001100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000011111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 0ED5A2ABE5A66047

After Initial Permutation: D202B39A3E7C09AD

Left Half Right Half Sub Key

Round: 1 00111110011111000000100110101101 01010000111101101101100110111100 010100000010110010101100010001000010001111000110

Round: 2 01010000111101101101100110111100 11000001100011000010101110110011 010100001010110010100100010101001010000101000001

Round: 3 11000001100011000010101110110011 00011010100010001001110010111101 110100001010110000100110011000101010010001001100

Round: 4 00011010100010001001110010111101 01101110010011101000110111101111 111000001010011000100110011010001011010110001010

Round: 5 01101110010011101000110111101111 01110011110100100000101111111001 111000001001011000100110001011000101010000101011

Round: 6 01110011110100100000101111111001 01100100000011001000100101000000 111000001001001001110010010011100101100001100010

Round: 7 01100100000011001000100101000000 00111101110110001010101011000001 101001001101001001110010100001001100100101111000

Round: 8 00111101110110001010101011000001 00010100111100011001111011000011 101001100101001101010010100000011001111001010000

Round: 9 00010100111100011001111011000011 11100101111010101100110110101001 001001100101001101010011110010010001001001011000

Round: 10 11100101111010101100110110101001 01001110000111110000101001011111 001011110101000101010001100100011101001000101100

Round: 11 01001110000111110000101001011111 01011010010010101010101111001101 000011110100000111011001000100000001111010100100

Round: 12 01011010010010101010101111001101 00110101000101011011000001100011 000111110100000110011001100110000010100010110101

Round: 13 00110101000101011011000001100011 01110010010011000000010001000010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011000000010001000010 00000000101100111110011101001111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111110 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3EE737AFDF1950AE

After Initial Permutation: 52759F3E9A8FB99F

Left Half Right Half Sub Key

Round: 1 10011010100011111011100110011111 11100001000101111110110000010011 010100000010110010101100010001000010001111000110

Round: 2 11100001000101111110110000010011 00111110011101011110111101011110 010100001010110010100100010101001010000101000001

Round: 3 00111110011101011110111101011110 11111111000000111110000010101111 110100001010110000100110011000101010010001001100

Round: 4 11111111000000111110000010101111 00111111000000001100010000000001 111000001010011000100110011010001011010110001010

Round: 5 00111111000000001100010000000001 00111010011111110010000101101111 111000001001011000100110001011000101010000101011

Round: 6 00111010011111110010000101101111 01101111111111110011111000011100 111000001001001001110010010011100101100001100010

Round: 7 01101111111111110011111000011100 00011001011111010010100010110000 101001001101001001110010100001001100100101111000

Round: 8 00011001011111010010100010110000 00110110001001001011000011110010 101001100101001101010010100000011001111001010000

Round: 9 00110110001001001011000011110010 01110101001100111100101011100111 001001100101001101010011110010010001001001011000

Round: 10 01110101001100111100101011100111 00011011011100010111110011010111 001011110101000101010001100100011101001000101100

Round: 11 00011011011100010111110011010111 11111101001110010010011011101101 000011110100000111011001000100000001111010100100

Round: 12 11111101001110010010011011101101 01101000011101001101110110000111 000111110100000110011001100110000010100010110101

Round: 13 01101000011101001101110110000111 01110010110011001000011001100000 000111110000100110001001001000110110101010010001

Round: 14 01110010110011001000011001100000 00000000101100111110011101001010 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001010 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111011 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 705EF227649A6918

After Initial Permutation: 57A71A48245DE22E

Left Half Right Half Sub Key

Round: 1 00100100010111011110001000101110 11010010111001010001000110100110 010100000010110010101100010001000010001111000110

Round: 2 11010010111001010001000110100110 10000100000100111100111010111111 010100001010110010100100010101001010000101000001

Round: 3 10000100000100111100111010111111 00001100100001101101011011000100 110100001010110000100110011000101010010001001100

Round: 4 00001100100001101101011011000100 11110110011001101011101111111100 111000001010011000100110011010001011010110001010

Round: 5 11110110011001101011101111111100 00000000000010001111111000010011 111000001001011000100110001011000101010000101011

Round: 6 00000000000010001111111000010011 11000111111011010011101011101000 111000001001001001110010010011100101100001100010

Round: 7 11000111111011010011101011101000 11100111011110110010110011110011 101001001101001001110010100001001100100101111000

Round: 8 11100111011110110010110011110011 10011110111101100101000001111111 101001100101001101010010100000011001111001010000

Round: 9 10011110111101100101000001111111 11001110110101110011010111001000 001001100101001101010011110010010001001001011000

Round: 10 11001110110101110011010111001000 10001111011010101000011101010101 001011110101000101010001100100011101001000101100

Round: 11 10001111011010101000011101010101 10100101000111001000011101000001 000011110100000111011001000100000001111010100100

Round: 12 10100101000111001000011101000001 00110010111000111100110100001111 000111110100000110011001100110000010100010110101

Round: 13 00110010111000111100110100001111 01100010011011100000100001001010 000111110000100110001001001000110110101010010001

Round: 14 01100010011011100000100001001010 00000000101100111110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 56FD4CF48980C8BD

After Initial Permutation: 4F8B8F92FA8AD601

Left Half Right Half Sub Key

Round: 1 11111010100010101101011000000001 11001111000011111110001000011101 010100000010110010101100010001000010001111000110

Round: 2 11001111000011111110001000011101 00011001010111000000001110101011 010100001010110010100100010101001010000101000001

Round: 3 00011001010111000000001110101011 00100000100001111001101010101000 110100001010110000100110011000101010010001001100

Round: 4 00100000100001111001101010101000 11001001101000011110100010100000 111000001010011000100110011010001011010110001010

Round: 5 11001001101000011110100010100000 00001101100001010110100011101011 111000001001011000100110001011000101010000101011

Round: 6 00001101100001010110100011101011 00101101111000111111100010000111 111000001001001001110010010011100101100001100010

Round: 7 00101101111000111111100010000111 10110010000101110011001111100101 101001001101001001110010100001001100100101111000

Round: 8 10110010000101110011001111100101 01011101000000110011000100100001 101001100101001101010010100000011001111001010000

Round: 9 01011101000000110011000100100001 10011010000101111111101010110100 001001100101001101010011110010010001001001011000

Round: 10 10011010000101111111101010110100 01110110111100100010001101001001 001011110101000101010001100100011101001000101100

Round: 11 01110110111100100010001101001001 01011001101001100000111100100001 000011110100000111011001000100000001111010100100

Round: 12 01011001101001100000111100100001 10100011100000101100010110101101 000111110100000110011001100110000010100010110101

Round: 13 10100011100000101100010110101101 11000010011010100001100001001010 000111110000100110001001001000110110101010010001

Round: 14 11000010011010100001100001001010 00000000101100101110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100101110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111100000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3A4287419F5D19CF

After Initial Permutation: AA71B4FC9401F197

Left Half Right Half Sub Key

Round: 1 10010100000000011111000110010111 01100100101101011101000011111100 010100000010110010101100010001000010001111000110

Round: 2 01100100101101011101000011111100 10011110111110000010011110011100 010100001010110010100100010101001010000101000001

Round: 3 10011110111110000010011110011100 00011110011010010101010001001001 110100001010110000100110011000101010010001001100

Round: 4 00011110011010010101010001001001 11000000000110101100100001111101 111000001010011000100110011010001011010110001010

Round: 5 11000000000110101100100001111101 10101110101000011110100011010010 111000001001011000100110001011000101010000101011

Round: 6 10101110101000011110100011010010 10000011100110100001000110111101 111000001001001001110010010011100101100001100010

Round: 7 10000011100110100001000110111101 10000111100110101110000101011011 101001001101001001110010100001001100100101111000

Round: 8 10000111100110101110000101011011 10001110000010110011101110001001 101001100101001101010010100000011001111001010000

Round: 9 10001110000010110011101110001001 10001000111011010101110000111100 001001100101001101010011110010010001001001011000

Round: 10 10001000111011010101110000111100 10001111000110100110000001010011 001011110101000101010001100100011101001000101100

Round: 11 10001111000110100110000001010011 01000100000100001101011110011000 000011110100000111011001000100000001111010100100

Round: 12 01000100000100001101011110011000 01110101100111011011011001110000 000111110100000110011001100110000010100010110101

Round: 13 01110101100111011011011001110000 01111010010011000000010001100010 000111110000100110001001001000110110101010010001

Round: 14 01111010010011000000010001100010 00000000101100111110011101001101 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001101 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111100 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 068FEBDB31F66D71

After Initial Permutation: ECB863DE2EF44E2F

Left Half Right Half Sub Key

Round: 1 00101110111101000100111000101111 00010001101100001110001100100000 010100000010110010101100010001000010001111000110

Round: 2 00010001101100001110001100100000 11111000010111001001111101001101 010100001010110010100100010101001010000101000001

Round: 3 11111000010111001001111101001101 10010001010101111010010110001101 110100001010110000100110011000101010010001001100

Round: 4 10010001010101111010010110001101 10100110010011111101000001111010 111000001010011000100110011010001011010110001010

Round: 5 10100110010011111101000001111010 00001000001110110110101000100000 111000001001011000100110001011000101010000101011

Round: 6 00001000001110110110101000100000 11010110010011110011010100000110 111000001001001001110010010011100101100001100010

Round: 7 11010110010011110011010100000110 11001101110011000100100100111101 101001001101001001110010100001001100100101111000

Round: 8 11001101110011000100100100111101 00000110101100111100101101011001 101001100101001101010010100000011001111001010000

Round: 9 00000110101100111100101101011001 00100001010101101111001010110000 001001100101001101010011110010010001001001011000

Round: 10 00100001010101101111001010110000 11110100101010111110001010101111 001011110101000101010001100100011101001000101100

Round: 11 11110100101010111110001010101111 00010000010000001101011010010110 000011110100000111011001000100000001111010100100

Round: 12 00010000010000001101011010010110 10011010010011111011010010101110 000111110100000110011001100110000010100010110101

Round: 13 10011010010011111011010010101110 01101000111011101000111001001000 000111110000100110001001001000110110101010010001

Round: 14 01101000111011101000111001001000 00000000101100111110011110001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011110001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000000111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 1B5C2F6913B67AE8

After Initial Permutation: CA73261DA0ECCF75

Left Half Right Half Sub Key

Round: 1 10100000111011001100111101110101 11001111000001101000001010111001 010100000010110010101100010001000010001111000110

Round: 2 11001111000001101000001010111001 01101111011011010011001010110111 010100001010110010100100010101001010000101000001

Round: 3 01101111011011010011001010110111 11111110101110001101001111000110 110100001010110000100110011000101010010001001100

Round: 4 11111110101110001101001111000110 11000111010100001010001010011100 111000001010011000100110011010001011010110001010

Round: 5 11000111010100001010001010011100 00010001000110101000101111000011 111000001001011000100110001011000101010000101011

Round: 6 00010001000110101000101111000011 01101100100111110111110000000111 111000001001001001110010010011100101100001100010

Round: 7 01101100100111110111110000000111 00111111101001011100011100010110 101001001101001001110010100001001100100101111000

Round: 8 00111111101001011100011100010110 11110001010011010111110111000011 101001100101001101010010100000011001111001010000

Round: 9 11110001010011010111110111000011 01000101000101101000110100001101 001001100101001101010011110010010001001001011000

Round: 10 01000101000101101000110100001101 00011100010010110011000000011011 001011110101000101010001100100011101001000101100

Round: 11 00011100010010110011000000011011 10000101000011000100010001000011 000011110100000111011001000100000001111010100100

Round: 12 10000101000011000100010001000011 00100011010100010100001110101111 000111110100000110011001100110000010100010110101

Round: 13 00100011010100010100001110101111 11100010011011100001100000001010 000111110000100110001001001000110110101010010001

Round: 14 11100010011011100001100000001010 00000000101100011110011110110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100011110011110110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111010000000000000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: ED244F7143AA7E0A

After Initial Permutation: 5D48471D216BE5F4

Left Half Right Half Sub Key

Round: 1 00100001011010111110010111110100 01010010000000000000010111111110 010100000010110010101100010001000010001111000110

Round: 2 01010010000000000000010111111110 11000101111010011110101110100110 010100001010110010100100010101001010000101000001

Round: 3 11000101111010011110101110100110 11010110011001101001101100011101 110100001010110000100110011000101010010001001100

Round: 4 11010110011001101001101100011101 11111000101110000011100011011010 111000001010011000100110011010001011010110001010

Round: 5 11111000101110000011100011011010 11101111000101100001011111100010 111000001001011000100110001011000101010000101011

Round: 6 11101111000101100001011111100010 01011100100010111000111111001001 111000001001001001110010010011100101100001100010

Round: 7 01011100100010111000111111001001 00000100010100111111011001100011 101001001101001001110010100001001100100101111000

Round: 8 00000100010100111111011001100011 11101011110010010000001001111000 101001100101001101010010100000011001111001010000

Round: 9 11101011110010010000001001111000 10000100101110011100011011100100 001001100101001101010011110010010001001001011000

Round: 10 10000100101110011100011011100100 01010011011100110001110110011001 001011110101000101010001100100011101001000101100

Round: 11 01010011011100110001110110011001 11111101000011111110010000100101 000011110100000111011001000100000001111010100100

Round: 12 11111101000011111110010000100101 00100100011100011010010011101100 000111110100000110011001100110000010100010110101

Round: 13 00100100011100011010010011101100 01110010010011100000110001100010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011100000110001100010 00000000101100111110011101001001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 0ED5A2ABE5A66047

After Initial Permutation: D202B39A3E7C09AD

Left Half Right Half Sub Key

Round: 1 00111110011111000000100110101101 01010000111101101101100110111100 010100000010110010101100010001000010001111000110

Round: 2 01010000111101101101100110111100 11000001100011000010101110110011 010100001010110010100100010101001010000101000001

Round: 3 11000001100011000010101110110011 00011010100010001001110010111101 110100001010110000100110011000101010010001001100

Round: 4 00011010100010001001110010111101 01101110010011101000110111101111 111000001010011000100110011010001011010110001010

Round: 5 01101110010011101000110111101111 01110011110100100000101111111001 111000001001011000100110001011000101010000101011

Round: 6 01110011110100100000101111111001 01100100000011001000100101000000 111000001001001001110010010011100101100001100010

Round: 7 01100100000011001000100101000000 00111101110110001010101011000001 101001001101001001110010100001001100100101111000

Round: 8 00111101110110001010101011000001 00010100111100011001111011000011 101001100101001101010010100000011001111001010000

Round: 9 00010100111100011001111011000011 11100101111010101100110110101001 001001100101001101010011110010010001001001011000

Round: 10 11100101111010101100110110101001 01001110000111110000101001011111 001011110101000101010001100100011101001000101100

Round: 11 01001110000111110000101001011111 01011010010010101010101111001101 000011110100000111011001000100000001111010100100

Round: 12 01011010010010101010101111001101 00110101000101011011000001100011 000111110100000110011001100110000010100010110101

Round: 13 00110101000101011011000001100011 01110010010011000000010001000010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011000000010001000010 00000000101100111110011101001111 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001111 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111110 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 04BC923699622A0D

After Initial Permutation: 201E8B90166AD26C

Left Half Right Half Sub Key

Round: 1 00010110011010101101001001101100 11100010101100110110111000000001 010100000010110010101100010001000010001111000110

Round: 2 11100010101100110110111000000001 11001110101001111101110000000100 010100001010110010100100010101001010000101000001

Round: 3 11001110101001111101110000000100 00000011000100100111101101000001 110100001010110000100110011000101010010001001100

Round: 4 00000011000100100111101101000001 00011001101000111100001101111101 111000001010011000100110011010001011010110001010

Round: 5 00011001101000111100001101111101 11110100111100101010100100110001 111000001001011000100110001011000101010000101011

Round: 6 11110100111100101010100100110001 01110001101111100010010000111101 111000001001001001110010010011100101100001100010

Round: 7 01110001101111100010010000111101 01101000011111001101110101001000 101001001101001001110010100001001100100101111000

Round: 8 01101000011111001101110101001000 10010011011111001100010001000111 101001100101001101010010100000011001111001010000

Round: 9 10010011011111001100010001000111 11101010010100110001110111010111 001001100101001101010011110010010001001001011000

Round: 10 11101010010100110001110111010111 11011110010010110110101000011011 001011110101000101010001100100011101001000101100

Round: 11 11011110010010110110101000011011 00111011111001011111111000100001 000011110100000111011001000100000001111010100100

Round: 12 00111011111001011111111000100001 00011101111001100011101001100010 000111110100000110011001100110000010100010110101

Round: 13 00011101111001100011101001100010 11101010101011001001001001101000 000111110000100110001001001000110110101010010001

Round: 14 11101010101011001001001001101000 00000000101101111110011110110010 000110110010100010001101001100110010000100010011

Round: 15 00000000101101111110011110110010 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111110110000000000000011 010100010010110010001100000101110000001111000010

Data Being Encrypted: D67A797FF68ADAF7

After Initial Permutation: DFDF998CF19E6EFB

Left Half Right Half Sub Key

Round: 1 11110001100111100110111011111011 00100001101100100110011001000100 010100000010110010101100010001000010001111000110

Round: 2 00100001101100100110011001000100 11100100101100101101011110101010 010100001010110010100100010101001010000101000001

Round: 3 11100100101100101101011110101010 00000010000101100001011010110011 110100001010110000100110011000101010010001001100

Round: 4 00000010000101100001011010110011 11110111100110111111010100111011 111000001010011000100110011010001011010110001010

Round: 5 11110111100110111111010100111011 10100001101110010100000111110110 111000001001011000100110001011000101010000101011

Round: 6 10100001101110010100000111110110 01011011000101011101001010101101 111000001001001001110010010011100101100001100010

Round: 7 01011011000101011101001010101101 10001000111100011010100111000111 101001001101001001110010100001001100100101111000

Round: 8 10001000111100011010100111000111 11010000010110111110100111111110 101001100101001101010010100000011001111001010000

Round: 9 11010000010110111110100111111110 10000001010000001010111011010000 001001100101001101010011110010010001001001011000

Round: 10 10000001010000001010111011010000 10010101111001111111101111100111 001011110101000101010001100100011101001000101100

Round: 11 10010101111001111111101111100111 11111001100011010000110101001111 000011110100000111011001000100000001111010100100

Round: 12 11111001100011010000110101001111 11101100111100000011111110100010 000111110100000110011001100110000010100010110101

Round: 13 11101100111100000011111110100010 01111000010111000000110001100011 000111110000100110001001001000110110101010010001

Round: 14 01111000010111000000110001100011 00000000101100111110011101000001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101000001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011110000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 59CBBE4A43CC5545

After Initial Permutation: FB45E4D326042F1E

Left Half Right Half Sub Key

Round: 1 00100110000001000010111100011110 10110101001111011101001000010001 010100000010110010101100010001000010001111000110

Round: 2 10110101001111011101001000010001 10101010111111111100100101111101 010100001010110010100100010101001010000101000001

Round: 3 10101010111111111100100101111101 00101101101011011011100000010111 110100001010110000100110011000101010010001001100

Round: 4 00101101101011011011100000010111 11010010100001011010000011100110 111000001010011000100110011010001011010110001010

Round: 5 11010010100001011010000011100110 00010001110000101001011000101001 111000001001011000100110001011000101010000101011

Round: 6 00010001110000101001011000101001 10101011001110000001101101001101 111000001001001001110010010011100101100001100010

Round: 7 10101011001110000001101101001101 10110001100111111011001010100101 101001001101001001110010100001001100100101111000

Round: 8 10110001100111111011001010100101 01101111111101011000001101110010 101001100101001101010010100000011001111001010000

Round: 9 01101111111101011000001101110010 11101100000011000110000111100000 001001100101001101010011110010010001001001011000

Round: 10 11101100000011000110000111100000 11101111001101101110111110111100 001011110101000101010001100100011101001000101100

Round: 11 11101111001101101110111110111100 00110010100100110100010100001100 000011110100000111011001000100000001111010100100

Round: 12 00110010100100110100010100001100 01100000011111101001111110000001 000111110100000110011001100110000010100010110101

Round: 13 01100000011111101001111110000001 01110000110011001000011001100001 000111110000100110001001001000110110101010010001

Round: 14 01110000110011001000011001100001 00000000101100111110011101011110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101011110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011101111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: D4CEB62ADCD55179

After Initial Permutation: F3F537E0378C9A0E

Left Half Right Half Sub Key

Round: 1 00110111100011001001101000001110 10000100000010100011110101010101 010100000010110010101100010001000010001111000110

Round: 2 10000100000010100011110101010101 10111010111111010001110101001001 010100001010110010100100010101001010000101000001

Round: 3 10111010111111010001110101001001 01111101010011101101000100100010 110100001010110000100110011000101010010001001100

Round: 4 01111101010011101101000100100010 11011000110000110111111000101100 111000001010011000100110011010001011010110001010

Round: 5 11011000110000110111111000101100 11110101011010001101000001011011 111000001001011000100110001011000101010000101011

Round: 6 11110101011010001101000001011011 10111111110010101111010100000001 111000001001001001110010010011100101100001100010

Round: 7 10111111110010101111010100000001 10011101000100010010100110110100 101001001101001001110010100001001100100101111000

Round: 8 10011101000100010010100110110100 00110010010110011001110111110110 101001100101001101010010100000011001111001010000

Round: 9 00110010010110011001110111110110 01001111011000001110011010011010 001001100101001101010011110010010001001001011000

Round: 10 01001111011000001110011010011010 00001110011111100000010011110111 001011110101000101010001100100011101001000101100

Round: 11 00001110011111100000010011110111 01010111101100111010111111010101 000011110100000111011001000100000001111010100100

Round: 12 01010111101100111010111111010101 11001101110100100111101000111111 000111110100000110011001100110000010100010110101

Round: 13 11001101110100100111101000111111 11101110101011101001001100001000 000111110000100110001001001000110110101010010001

Round: 14 11101110101011101001001100001000 00000000101110111110011110110110 000110110010100010001101001100110010000100010011

Round: 15 00000000101110111110011110110110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111101110000000000000111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 3DB67FF8318B453E

After Initial Permutation: 4C9FC7752A9FADA6

Left Half Right Half Sub Key

Round: 1 00101010100111111010110110100110 00101001000110111011100111101101 010100000010110010101100010001000010001111000110

Round: 2 00101001000110111011100111101101 11010011011001110101100110011011 010100001010110010100100010101001010000101000001

Round: 3 11010011011001110101100110011011 01011111001011100011110100001110 110100001010110000100110011000101010010001001100

Round: 4 01011111001011100011110100001110 11110101100001000101001110100100 111000001010011000100110011010001011010110001010

Round: 5 11110101100001000101001110100100 01111101100110110110000010111100 111000001001011000100110001011000101010000101011

Round: 6 01111101100110110110000010111100 10101100000011000101010101011011 111000001001001001110010010011100101100001100010

Round: 7 10101100000011000101010101011011 01110010111110010101010110000101 101001001101001001110010100001001100100101111000

Round: 8 01110010111110010101010110000101 01010001010100010011101001000010 101001100101001101010010100000011001111001010000

Round: 9 01010001010100010011101001000010 10100001000111111010110111011100 001001100101001101010011110010010001001001011000

Round: 10 10100001000111111010110111011100 00100111011110001011000111011110 001011110101000101010001100100011101001000101100

Round: 11 00100111011110001011000111011110 11110101001111010100000000100111 000011110100000111011001000100000001111010100100

Round: 12 11110101001111010100000000100111 00100100011100011010000011110101 000111110100000110011001100110000010100010110101

Round: 13 00100100011100011010000011110101 01110010010011100000110001000010 000111110000100110001001001000110110101010010001

Round: 14 01110010010011100000110001000010 00000000101100111110011101010001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101010001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011100000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 0A6B9492F2A14C27

After Initial Permutation: 521CC4A23CB2439B

Left Half Right Half Sub Key

Round: 1 00111100101100100100001110011011 00111001101100111011011011111001 010100000010110010101100010001000010001111000110

Round: 2 00111001101100111011011011111001 10110010000011001010010000001000 010100001010110010100100010101001010000101000001

Round: 3 10110010000011001010010000001000 00001010101111011101000110100110 110100001010110000100110011000101010010001001100

Round: 4 00001010101111011101000110100110 01001001000001011000110000000010 111000001010011000100110011010001011010110001010

Round: 5 01001001000001011000110000000010 01000111010001111011100000001110 111000001001011000100110001011000101010000101011

Round: 6 01000111010001111011100000001110 10110100001000101111001010100110 111000001001001001110010010011100101100001100010

Round: 7 10110100001000101111001010100110 00100011010111001101111111001100 101001001101001001110010100001001100100101111000

Round: 8 00100011010111001101111111001100 00011000110010100101111111000101 101001100101001101010010100000011001111001010000

Round: 9 00011000110010100101111111000101 11100000100010010111110001000111 001001100101001101010011110010010001001001011000

Round: 10 11100000100010010111110001000111 01011100000011101001101000001000 001011110101000101010001100100011101001000101100

Round: 11 01011100000011101001101000001000 10100010001000100011111010101001 000011110100000111011001000100000001111010100100

Round: 12 10100010001000100011111010101001 01110111110001001010010010101111 000111110100000110011001100110000010100010110101

Round: 13 01110111110001001010010010101111 11100110101011011001011101101001 000111110000100110001001001000110110101010010001

Round: 14 11100110101011011001011101101001 00000000101000111110011110111110 000110110010100010001101001100110010000100010011

Round: 15 00000000101000111110011110111110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111011110000000000001111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 4D43EE49CE3E6BB0

After Initial Permutation: 5FA0354B94E47D76

Left Half Right Half Sub Key

Round: 1 10010100111001000111110101110110 01010110110100000110100110111001 010100000010110010101100010001000010001111000110

Round: 2 01010110110100000110100110111001 00111110100111100000111001110110 010100001010110010100100010101001010000101000001

Round: 3 00111110100111100000111001110110 10111111111111110100000111101001 110100001010110000100110011000101010010001001100

Round: 4 10111111111111110100000111101001 11111110010000011010110100100101 111000001010011000100110011010001011010110001010

Round: 5 11111110010000011010110100100101 11100011110011100101011110110010 111000001001011000100110001011000101010000101011

Round: 6 11100011110011100101011110110010 00111010101001001000010111110000 111000001001001001110010010011100101100001100010

Round: 7 00111010101001001000010111110000 00101010000000000001110111101101 101001001101001001110010100001001100100101111000

Round: 8 00101010000000000001110111101101 11101010111110111101001101110100 101001100101001101010010100000011001111001010000

Round: 9 11101010111110111101001101110100 00111110100100110111010011110110 001001100101001101010011110010010001001001011000

Round: 10 00111110100100110111010011110110 11001110010110011001110000100010 001011110101000101010001100100011101001000101100

Round: 11 11001110010110011001110000100010 10111100001001011000111010010101 000011110100000111011001000100000001111010100100

Round: 12 10111100001001011000111010010101 00110100011100011100000011001101 000111110100000110011001100110000010100010110101

Round: 13 00110100011100011100000011001101 01110000010011100000100001000010 000111110000100110001001001000110110101010010001

Round: 14 01110000010011100000100001000010 00000000101100111110011101110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 094A74B9C180871F

After Initial Permutation: 168CC4D9780C8BC2

Left Half Right Half Sub Key

Round: 1 01111000000011001000101111000010 01100000110101010100000101100110 010100000010110010101100010001000010001111000110

Round: 2 01100000110101010100000101100110 01110001100110100000000001100001 010100001010110010100100010101001010000101000001

Round: 3 01110001100110100000000001100001 01001011010011011101010110010001 110100001010110000100110011000101010010001001100

Round: 4 01001011010011011101010110010001 00011010011000100110001101000111 111000001010011000100110011010001011010110001010

Round: 5 00011010011000100110001101000111 00111110101000010000111111100101 111000001001011000100110001011000101010000101011

Round: 6 00111110101000010000111111100101 01001011100111001000010000010110 111000001001001001110010010011100101100001100010

Round: 7 01001011100111001000010000010110 01100111101011001011011010011101 101001001101001001110010100001001100100101111000

Round: 8 01100111101011001011011010011101 01110111011111111011100000000111 101001100101001101010010100000011001111001010000

Round: 9 01110111011111111011100000000111 10110110101111110000101001111000 001001100101001101010011110010010001001001011000

Round: 10 10110110101111110000101001111000 11101101110111010011110111001101 001011110101000101010001100100011101001000101100

Round: 11 11101101110111010011110111001101 11100001100010011110000001101010 000011110100000111011001000100000001111010100100

Round: 12 11100001100010011110000001101010 00000100010101001110111111000000 000111110100000110011001100110000010100010110101

Round: 13 00000100010101001110111111000000 01101100111111101000111101001001 000111110000100110001001001000110110101010010001

Round: 14 01101100111111101000111101001001 00000000100100111110011110101110 000110110010100010001101001100110010000100010011

Round: 15 00000000100100111110011110101110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000110111110000000000011111 010100010010110010001100000101110000001111000010

Data Being Encrypted: C49E2B2510C8A822

After Initial Permutation: 21120B0C63CC6686

Left Half Right Half Sub Key

Round: 1 01100011110011000110011010000110 00110001000001111100011101001110 010100000010110010101100010001000010001111000110

Round: 2 00110001000001111100011101001110 01000111011010011010000111011111 010100001010110010100100010101001010000101000001

Round: 3 01000111011010011010000111011111 11101001111100111111010010001001 110100001010110000100110011000101010010001001100

Round: 4 11101001111100111111010010001001 11110011111001111011011010011011 111000001010011000100110011010001011010110001010

Round: 5 11110011111001111011011010011011 01111010010100011110011110001100 111000001001011000100110001011000101010000101011

Round: 6 01111010010100011110011110001100 10100001001010101111110000101100 111000001001001001110010010011100101100001100010

Round: 7 10100001001010101111110000101100 01110100101111001111111011011100 101001001101001001110010100001001100100101111000

Round: 8 01110100101111001111111011011100 01110001011110010011010011000101 101001100101001101010010100000011001111001010000

Round: 9 01110001011110010011010011000101 00010100110011010001101010000000 001001100101001101010011110010010001001001011000

Round: 10 00010100110011010001101010000000 00111100110111110110110010111111 001011110101000101010001100100011101001000101100

Round: 11 00111100110111110110110010111111 10001001011010000111101101110001 000011110100000111011001000100000001111010100100

Round: 12 10001001011010000111101101110001 00101100001100001011101111010011 000111110100000110011001100110000010100010110101

Round: 13 00101100001100001011101111010011 01110010010111100000110001000011 000111110000100110001001001000110110101010010001

Round: 14 01110010010111100000110001000011 00000000101100111110011100110001 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011100110001 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000010000000 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: E27037BDEFD49E9C

After Initial Permutation: 33EEFC1CF91FD855

Left Half Right Half Sub Key

Round: 1 11111001000111111101100001010101 00100000011010101110100010110011 010100000010110010101100010001000010001111000110

Round: 2 00100000011010101110100010110011 00111000000010001001000101101110 010100001010110010100100010101001010000101000001

Round: 3 00111000000010001001000101101110 00000011011010101011100110010111 110100001010110000100110011000101010010001001100

Round: 4 00000011011010101011100110010111 01110010000111111000101111110110 111000001010011000100110011010001011010110001010

Round: 5 01110010000111111000101111110110 00010010111100100101111100011111 111000001001011000100110001011000101010000101011

Round: 6 00010010111100100101111100011111 01000010110101100010110011101100 111000001001001001110010010011100101100001100010

Round: 7 01000010110101100010110011101100 00101101000000001001110110001101 101001001101001001110010100001001100100101111000

Round: 8 00101101000000001001110110001101 01110011100111000110111101101100 101001100101001101010010100000011001111001010000

Round: 9 01110011100111000110111101101100 10101011011000111101111101101000 001001100101001101010011110010010001001001011000

Round: 10 10101011011000111101111101101000 11110101100001011011101001001111 001011110101000101010001100100011101001000101100

Round: 11 11110101100001011011101001001111 11001111010110011100111000010111 000011110100000111011001000100000001111010100100

Round: 12 11001111010110011100111000010111 10011000110111001011101101001010 000111110100000110011001100110000010100010110101

Round: 13 10011000110111001011101101001010 01111010110011101000111001000000 000111110000100110001001001000110110101010010001

Round: 14 01111010110011101000111001000000 00000000101100111110011101001110 000110110010100010001101001100110010000100010011

Round: 15 00000000101100111110011101001110 00000000111111110000000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111110000000000000000 00000000111111110000000011111111 010100010010110010001100000101110000001111000010

Data Being Encrypted: 05BF84AA9C8C7144

After Initial Permutation: C052B7433E4A3A0A

Left Half Right Half Sub Key

Round: 1 00111110010010100011101000001010 01011111001001010111010100100010 010100000010110010101100010001000010001111000110

Round: 2 01011111001001010111010100100010 10111001101001011101101000010100 010100001010110010100100010101001010000101000001

Round: 3 10111001101001011101101000010100 10101010110101100001101100101111 110100001010110000100110011000101010010001001100

Round: 4 10101010110101100001101100101111 11001001001010000101011110011001 111000001010011000100110011010001011010110001010

Round: 5 11001001001010000101011110011001 11011010101010100110111010000010 111000001001011000100110001011000101010000101011

Round: 6 11011010101010100110111010000010 10001111001011111011001010010011 111000001001001001110010010011100101100001100010

Round: 7 10001111001011111011001010010011 10111110011001010000000111010011 101001001101001001110010100001001100100101111000

Round: 8 10111110011001010000000111010011 01110001001110001001101110001011 101001100101001101010010100000011001111001010000

Round: 9 01110001001110001001101110001011 01011001000100001111010000100110 001001100101001101010011110010010001001001011000

Round: 10 01011001000100001111010000100110 11001101010000101110111000000001 001011110101000101010001100100011101001000101100

Round: 11 11001101010000101110111000000001 11011101011001101111000011101110 000011110100000111011001000100000001111010100100

Round: 12 11011101011001101111000011101110 00110110111001100100011010111101 000111110100000110011001100110000010100010110101

Round: 13 00110110111001100100011010111101 01101011000100100001001110100101 000111110000100110001001001000110110101010010001

Round: 14 01101011000100100001001110100101 10100000011101110011011111001110 000110110010100010001101001100110010000100010011

Round: 15 10100000011101110011011111001110 00000000111111111100000000000000 000110010010110010001100101001110000000100000110

Round: 16 00000000111111111100000000000000 00000000001111111100000011111111 010100010010110010001100000101110000001111000010

Plain Text = 0000000000000000111111000000000000000000 0000000000000001110011110000000000000000 0000000000000001000001110000000000000000 0000000000000001000000111000000000000000 0000000000000000011110011000000000000000 0000000000000000111110011000000000000000 0000000000000000001111001000000000000000 0000000000000000001110001000000000000000 0000000000000001111111111000000000000000 0000000000000001111111111000000000000000 0000000000000000111111111000000000000000 0000000000000000000011111000000000000000 0000000000000000100111111000000000000000 0000000000000000000111011001110000000000 0000000000011100000110011111110000000000 0000000000011110001101111111111000000000 0000000001111111110111111111111100000000 0000000001111111111111111111111111111000 0000000001111111111111011111111111111111 0000000001111111111111111011111111111111 0000000001111111111111111111111111111111 0000000001111111111111111111111111111111 0000000001111111111111111111111111111111

1. Bagaimana hasil image, setelah ciphertext dikembalikan menjadi plaintext?

