```c
#include <stdio.h>
#include "prototypes.h"


int main(void)
{

#if DEMO
    /* Data from project demo for testing*/
    unsigned char input[16] = { 0x00, 0x11, 0x22, 0x33, 0x44, 0x55, 0x66, 0x77,
      0x88, 0x99, 0xaa, 0xbb, 0xcc, 0xdd, 0xee, 0xff };
    unsigned char key[256]  = { 0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07,
      0x08, 0x09, 0x0a, 0x0b, 0x0c, 0x0d, 0x0e, 0x0f };
    char * sboxType = "original";
#else

    unsigned char input[16] = { 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
      0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xab, 0xd1 };
    unsigned char key[256]  = { 0x1a, 0x0c, 0x24, 0xf2, 0x87, 0x54, 0x93, 0xbc,
      0xb7, 0x08, 0x0e, 0x43, 0x93, 0x0f, 0x56, 0x81 };
    char * sboxType = "modified";
#endif

    printf("\n\n-------------------------------------------------------------\n\n");
    printf("ID1 = 104 337 378  (Jason Choquette) \n");
    printf("ID2 = 103 385 550  (Yu Sheng Tian) \n");
    printf("Group Code (J, Y)= (3,7) \n\n\n");
    printf("Assigned Plaintext and Key:\n");
    printf("\t");
    for (int i = 0; i < 16; i++)
        printf("%02x ", input[i]);

    printf("\n\t");
    for (int i = 0; i < 16; i++)
        printf("%02x ", key[i]);

    printf("\n\n\n");
    printf("-------------------------------------------------------------\n");
    printf("Key Schedule Results for Each Round with the %s AES:\n", sboxType);
    printf("-------------------------------------------------------------\n");

    print_expand_key(key);

    printf("\n\n");
    printf("-------------------------------------------------------------\n");
    printf("Data Results for Each Round with the %s AES:\n", sboxType);
    printf("-------------------------------------------------------------\n");

    AesEncrypt(input, key, 10);

    getchar();
    return 0;
```

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49  }
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