```python
IP = [58, 50, 42, 34, 26, 18, 10, 2,
      60, 52, 44, 36, 28, 20, 12, 4,
      62, 54, 46, 38, 30, 22, 14, 6,
      64, 56, 48, 40, 32, 24, 16, 8,
      57, 49, 41, 33, 25, 17, 9, 1,
      59, 51, 43, 35, 27, 19, 11, 3,
      61, 53, 45, 37, 29, 21, 13, 5,
      63, 55, 47, 39, 31, 23, 15, 7]

# Final permutation (inverse of initial)
FP = [40, 8, 48, 16, 56, 24, 64, 32,
      39, 7, 47, 15, 55, 23, 63, 31,
      38, 6, 46, 14, 54, 22, 62, 30,
      37, 5, 45, 13, 53, 21, 61, 29,
      36, 4, 44, 12, 52, 20, 60, 28,
      35, 3, 43, 11, 51, 19, 59, 27,
      34, 2, 42, 10, 50, 18, 58, 26,
      33, 1, 41, 9, 49, 17, 57, 25]

# Simple permutation function
def permute(bits, table):
    return [bits[i - 1] for i in table]

# Convert string to bit array
def string_to_bits(s):
    result = []
    for c in s:
        bits = bin(ord(c))[2:].zfill(8)
        result.extend([int(b) for b in bits])
    return result

# Convert bit array to string
def bits_to_string(b):
    chars = []
    for i in range(0, len(b), 8):
        byte = b[i:i+8]
        chars.append(chr(int(''.join(map(str, byte)), 2)))
    return ''.join(chars)

# Very simplified round (just swaps halves)
def simple_round(left, right, key):
    return right, [l ^ k for l, k in zip(left, key[:len(left)])]

# Simple DES encryption (1 round)
def simple_des_encrypt(plaintext, key):
    bits = string_to_bits(plaintext)
    bits = permute(bits, IP)
    left = bits[:32]
    right = bits[32:]
    key_bits = string_to_bits(key)
    left, right = simple_round(left, right, key_bits)

    combined = left + right
    final_bits = permute(combined, FP)
    return bits_to_string(final_bits)

# Simple DES decryption (1 round)
def simple_des_decrypt(ciphertext, key):
    bits = string_to_bits(ciphertext)
    bits = permute(bits, IP)
    left = bits[:32]
    right = bits[32:]
    key_bits = string_to_bits(key)

    right, left = simple_round(right, left, key_bits)

    combined = left + right
    final_bits = permute(combined, FP)
    return bits_to_string(final_bits)

# Example usage
plaintext = "janhat124"     # 8 characters = 64 bits
key = "ADGFHS56"           # 8 characters = 64 bits

cipher = simple_des_encrypt(plaintext, key)
print("Encrypted:", cipher)

original = simple_des_decrypt(cipher, key)
print("Decrypted:", original)
```