```
C:\Users\haibo\dev\Study\AlgoImage\venv\Scripts\python.exe C:/Users/haibo/dev/Study/Cryptho/tp1.py
WOED [1, 1, 0, 1, 1, 0, 1, 0]
<module> ['KEY', [0, 1, 1, 0, 1, 0, 1, 1, 0, 0]]
<module> ['WORD', [1, 1, 0, 1, 1, 0, 1, 0]]
encrypt ['IP', [1, 0, 0, 1, 1, 0, 1, 1]]
generate_key ['P10', [1, 1, 1, 1, 0, 0, 0, 0, 1, 0]]
generate_key ['2*LS-1', [1, 1, 1, 0, 1, 0, 0, 1, 0, 0]]
generate_key ['P8', [0, 1, 0, 0, 1, 1, 0, 0]]
encrypt ['KEY1', [0, 1, 1, 0, 1, 0, 1, 1, 0, 0]]
generate_key ['P10', [1, 1, 1, 1, 0, 0, 0, 0, 1, 0]]
generate_key ['2*LS-1', [1, 1, 1, 0, 1, 0, 0, 1, 0, 0]]
generate_key ['2*LS-1', [1, 0, 1, 1, 1, 1, 0, 0, 0, 0]]
generate_key ['P8', [1, 1, 0, 1, 0, 1, 0, 0]]
encrypt ['KEY2', [1, 1, 0, 1, 0, 1, 0, 0]]
FK ['SubKEY', [0, 1, 0, 0, 1, 1, 0, 0]]
FK ['E/P', [[1, 1, 0, 1], [0, 1, 1, 1]]]
FK ['XOR(KEY1 and E/EP)', [[1, 0, 0, 1], [1, 0, 1, 1]]]
FK ['sboxResult', [1, 1, 0, 1]]
FK ['LeftBloc', [1, 0, 0, 1]]
FK ['P4', [1, 1, 0, 1]]
FK ['XOR P4', [0, 1, 0, 0]]
encrypt ['FK1', [0, 1, 0, 0, 1, 0, 1, 1]]
encrypt ['SW', [1, 0, 1, 1, 0, 1, 0, 0]]
FK ['SubKEY', [1, 1, 0, 1, 0, 1, 0, 0]]
FK ['E/P', [[0, 0, 1, 0], [1, 0, 0, 0]]]
FK ['XOR(KEY1 and E/EP)', [[1, 1, 1, 1], [1, 1, 0, 0]]]
FK ['sboxResult', [1, 0, 0, 1]]
FK ['LeftBloc', [1, 0, 1, 1]]
FK ['P4', [0, 1, 0, 1]]
FK ['XOR P4', [1, 1, 1, 0]]
encrypt ['FK2', [1, 1, 1, 0, 0, 1, 0, 0]]
CRYPTED [0, 1, 1, 0, 0, 1, 0, 1]
DECRYPTAGE ----------
generate_key ['P10', [1, 1, 1, 1, 0, 0, 0, 0, 1, 0]]
generate_key ['2*LS-1', [1, 1, 1, 0, 1, 0, 0, 1, 0, 0]]
generate_key ['P8', [0, 1, 0, 0, 1, 1, 0, 0]]
decrypt ['KE2', [0, 1, 0, 0, 1, 1, 0, 0]]
generate_key ['P10', [1, 1, 1, 1, 0, 0, 0, 0, 1, 0]]
generate_key ['2*LS-1', [1, 1, 1, 0, 1, 0, 0, 1, 0, 0]]
generate_key ['2*LS-1', [1, 0, 1, 1, 1, 1, 0, 0, 0, 0]]
generate_key ['P8', [1, 1, 0, 1, 0, 1, 0, 0]]
decrypt ['KEY2', [1, 1, 0, 1, 0, 1, 0, 0]]
decrypt ['IP', [1, 1, 1, 0, 0, 1, 0, 0]]
FK ['SubKEY', [1, 1, 0, 1, 0, 1, 0, 0]]
FK ['E/P', [[0, 0, 1, 0], [1, 0, 0, 0]]]
FK ['XOR(KEY1 and E/EP)', [[1, 1, 1, 1], [1, 1, 0, 0]]]
FK ['sboxResult', [1, 0, 0, 1]]
FK ['LeftBloc', [1, 1, 1, 0]]
FK ['P4', [0, 1, 0, 1]]
FK ['XOR P4', [1, 0, 1, 1]]
decrypt ['FK1', [1, 0, 1, 1, 0, 1, 0, 0]]
decrypt ['SW', [0, 1, 0, 0, 1, 0, 1, 1]]
FK ['SubKEY', [0, 1, 0, 0, 1, 1, 0, 0]]
FK ['E/P', [[1, 1, 0, 1], [0, 1, 1, 1]]]
FK ['XOR(KEY1 and E/EP)', [[1, 0, 0, 1], [1, 0, 1, 1]]]
FK ['sboxResult', [1, 1, 0, 1]]
FK ['LeftBloc', [0, 1, 0, 0]]
FK ['P4', [1, 1, 0, 1]]
FK ['XOR P4', [1, 0, 0, 1]]
decrypt ['FK1', [1, 0, 0, 1, 1, 0, 1, 1]]
DECRYPTED [1, 1, 0, 1, 1, 0, 1, 0]

Process finished with exit code 0

```