**Assignment 5**

Write a program in C,C++, Java, to implement key generation algorithm.

Input: keyword of 8 characters.

Output: 16 different round keys each of 48 bit.

Procedure for key generation

1. Convert each character in 8 bit binary code.
2. Generate the cipher key (56 bits) by passing it through parity drop. Parity drop acts as compression D-box. Compression D-box would block every 8th input bit.
3. Now divide this 56 bit into 4 equal halves each of 14 bit.
4. Pass each of the 14 bit to shift box and shift left according to round.
5. Again pass it through compression D-box to make it 48 bit round key.
6. Goto step 3 with input as output of step 4 and repeat until all 16 different keys have been generated.