## Bit Manipulation:-

- 1. Write a prorgram for the following one.
  - a) Set a bit b) Clear a bit c) Toggle a bit
- 2. WAP to find the given number is even or odd using bitwise operators.
- 3. WAP to find the given number is +ve or -ve using bitwise operators.
- 4. WAP to swap two numbers using bitwise operators.
- 5. WAP to find the given number is power of 2 or not.
- 6. WAP to find the given number is divisble by 8 or not using bitwise operators.
- 7. Write a program to rotate the bits. Input the no. of rotations, at runtime.

Ex:

rotations: suppose 3 times right, then

2) binary: 1000000000000000000000000001011

rotations: suppose 4 times left, then

result: 00000000000000000000000010111000

- 8. Convert the characters Upper to Lower and Lower to Upper using bitwise operators.
- 9. Write a program to reverse the bits of a given number (not just reverse printing).
- 10. Write a one line code to compare two numbers equal or not using bitwise operators.
- 11. Write a program to swap the adjucent bytes of a given 4-digit hexadecimal number.

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Ex:
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given number = 0x1234;
after swap = 0x3412;
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12. Write a program to delete no.of bits from particular position in a given number. Input the no.of bits, at runtime.

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Ex:
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```
Suppose num = 100;
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It's Binaray is 000000000000000000000001100100
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delete 2 bits from 4<sup>th</sup> position

then result is 000000000000000000000000011100

| 13. Write a programme for swapping first and last nibbles in a given integer.  |
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| Ex:  |
| Suppose $num = 10$   |
| It's Binary is 00000000000000000000000000000000000   |
| After swap 1010000000000000000000000000000000000   |
| 14. Write a logic to extract P bits from Posion N in an integer M. Ex: $M = 171$ $P = 5$ $N = 2$ 171 in binary: 000000000000000000000000000000000000 |
| END  |