

## Level 2

1. There are N number of bulbs. In 1<sup>st</sup> round you turn on all the bulbs. In the 2<sup>nd</sup> round you turn off every second bulb. In the 3<sup>rd</sup> round you toggle every 3<sup>rd</sup> bulb. At last toggle the last bulb.

Count number of bulbs turned on.

2. Anagram

3. Remove duplicate letters for a string and display it.

4. Check whether the brackets [{ have proper closing brackets.

Input: {{{[ ]}}

Output: False

5. Convert integer to English representation.

Input- 123

Output- one hundred twenty three

## Level 3

1. Convert IPv4 to IPv6.

2. Display DNS from IPv4 and subnet mask.

Eg: IPv4 – 138.38.50.67

Subnet mask- 255.255.254.0

Convert both into binary. And perform & operation. Convert the result into decimal.

3. CIDR notation using IPv4 and Subnet mask.

Eg: IPv4 – 138.38.50.67

Subnet mask- 255.255.254.2

Convert 255, 255, 254 of subnet mask into binary and count number of 1's.

If count= 23

Output: 138.38.50.67/23