Topics to discuss

Convert binary to decimal

$$(x)_2 = (x)_{10}$$

```
static int solution (long n){
    int decimal = 0
     int pow = 1
     while (n != 0) {
      long rem = n%10;
      n = n/10;
      decimal += rem * pow;
      pow = pow * 2;
      }
      return decimal;
}
```

initially, decimal = 0
pow = 1
n = 1100

① rem = 1100 % 10 = 0
n = 1100/10 = 110
decimal = 0 + 0×1 = 0
pow = 1×2 = 2

② rem = 110 % 10 = 0
n = 110/10 = 11
decimal = 0 + 0×2 = 0
pow = 2×2 = 4

③ rem = 11 % 10 = 1
n = 11/10 = 1
decimal = 0 + 1×4 = 4
pow = 4×2 = 8

④ rem = 1 % 10 = 1
n = 1/10 = 0
decimal = 4 + 1×8 = 12
pow = 8×2 = 16

n != 0

decimal = 12.

T.C = O(log n)
S.C = O(1)

```
static int solution2 (long n){
    string str = Long.toString(n);
    return (Integer.parseInt(str, 2));
}
```

T.C = O(n)

S.C = O(1)

Syntax of parseInt : parseInt(string , radix)

Return an integer value with base specified as radix.

Radix specifies that the number system to be used.

for eg: binary = 2 , octal = 8

Follow Now

Start Practicing

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