Example Problem : Sum of n natural numbers

Input : n=3
Output : 6 // 1+2+3

Input : n=5
Output : 15 // 1+2+3+4+5

3 logics :

```
int fun1( int n)
{
    return n*(n+1)/2;
}
```

```
int fun2 (int n)
{   int sum=0;
    for(int i=1; i<=n; i++)
        sum= sum+i;
    return sum;
}
```

```
int fun3 (int n)
{
    int sum=0;
    for(int i=1; i<=n; i++)
        for( int j=1; j<=i; j++)
            sum++;
    return sum;
}

// 1 + (1+1) + (1+1+1)...
```

↳ Analysis of algorithm is necessary for knowing the efficiency of program.
↳ There are many factors invalved in finding the efficiency of the program.
  ↳ for some computers code might run efficiently
  ↳ also based on which language we are using.

To deal with this problem of finding efficiency we use the concept of Asymptotic Analysis.