

Functions

* In our Journey So far have you seen any function?

We have seen main, which is also a function.

* Let take an Example to understand problem in not using function.

Ex: Find the Sum of digits of 3 numbers.

Code:-

Main C > \$

```
int sum1=0, sum2=0, sum3=0
```

```
while (a > 0) {
```

```
    sum1 += a % 10;
```

```
    a = a / 10
```

```
}
```

```
while (b > 0) {
```

```
    sum2 += b % 10;
```

```
    b = b / 10
```

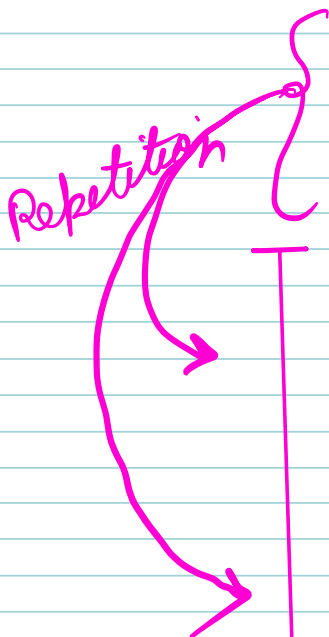
```
}
```

```
while (c > 0) {
```

```
    sum3 += c % 10;
```

```
    c = c / 10
```

Repetition



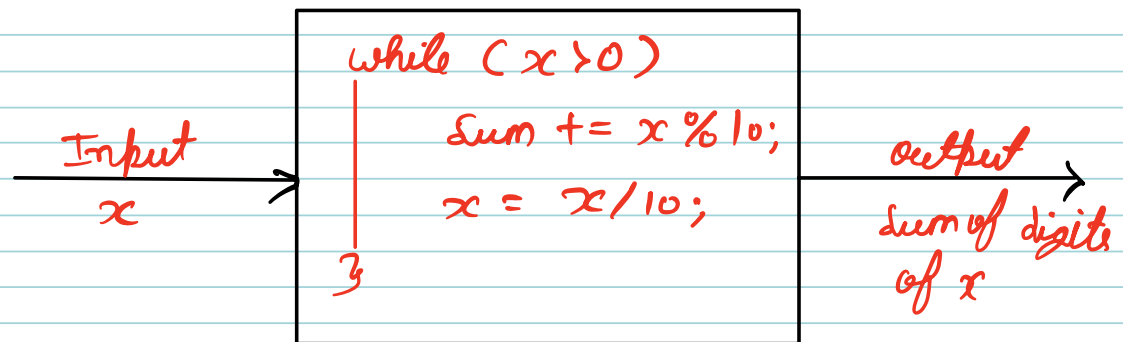
1 | 3

* Problems with the above code.

- Repetition
- Readability
- Maintainability

How we can fix these problems?

⇒ We can use Function. Functions are a kind of black box, to which we give input & get desired output



Syntax

```
ans Type  function Name ( input Type  input ) {  
    // main logic;  
    return ans;  
}
```

Ex:-

```
int Sumofdigits ( int x ) {
```

```
    int Sum = 0;  
    while ( x > 0 ) {  
        Sum += x % 10;  
        x = x / 10;  
    }  
    return Sum;  
}
```

DOUBT SESSION

N=5

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Row	^x St1	Spaces	^x St2
1	1	8	1
2	2	6	2
3	3	4	3
4	4	2	4
5	5	0	5

$$\therefore \boxed{\text{Row} = \text{St1} = \text{St2}}$$

$$\boxed{\text{Space} = 2 * N - 2 * \text{Row}}$$

ONLINE IDE

https://www.scaler.com/topics/java/online-java-compiler/?snippet_slug=5f10cd554e7b015300f9