## Day - 18

### Functions in C++

**Why?**

=) For ex. If we want factorial and check if a prime 🗴 or not for 5, 6 or more than this.
no. is

⤳ Then we have to write the code everytime.

=) ~~Here~~ So to solve this problem we use functions.

= Functions increase the reusability of the code.

**Syntax**

= return type function name ( Parameter 1, Par. 2...)
{
  { code part ; ?
  return value ;
}

=) **return type**  int, float, long, void
          when we don't want to
                    return something

Ex: Prime no.

Parameter

```
bool    prime (int n) {        → fun. declaration
        if (n < 2) {
            return 0;
        }
        for (i=2, i< n ; i++) {
            if (n%i ==0 )
                return 0;
        }
        return 1;
}
```

fun. definition

```
int main() {
    int a, b;
    cin >> a >> b;
    cout << prime (a);      → fun. calling
}
        → argument
```

① Pass by value

```
void incr (int n) {
    n++;
}
int main() {
    int a = 10;
    incr (a);
    cout << a;
}
```
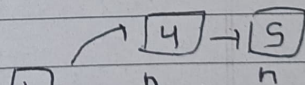
$$\boxed{4} \rightarrow \boxed{5}$$
$$\quad n \qquad\quad n$$

$\boxed{4}$

a → when we print n
It will print
4

②     <u>Pass by reference:</u>

⟹     Here, another copy doesn't form instead we do the changes in that same variable that we passed.

⟹     For doing this, we add '&' with the parameter in the function.