Function:-

Function Structure.

```
return_type  Function_name ( Parameter1,
                              Parameter2 .....)
{
    {
        code ..... Part
    }
    return value;
}
```

return_type :- What type of data he will given.
(int, Float, double, boolean, char) void.

Q. Check given no is Prime or Not?

```
bool isPrimeNo( int n) {

    if ( n<2 ) {
        return 0;
    }
    For(int i=2; i<n; i++) {
        if( n%i==0){
            return 0;
        }
    }
    return 1;
}
```

0! = 1
1! = 1

Q. Find an Factorial of given number.

```
int isFact ( int n) {

    if (n==0) {
        return 1;
    }

    int ans = 1 ;
    for ( int i=1 ; i<=n; i++) {
        ans = ans * i ;
    }
    return ans;
}
```

Function calling

```
int main() {

    int a, b;
    cin >> a >> b;

    cout << isPrimeNo (a) ;
    cout << isFact (a);
    cout << isPrimeNo (b);
    cout << isFact (b);
    cout << isPrimeNo (b-a);
    cout << isFact (b-a);
```

arguments

What is the use of Function?

i) To reduce the repeated the written code into one code.

ii) Readibility increases.

iii) Reusability increases.

Q: Write a Function code for sum of two number.

```
int isSum( int a , int b) {

        int ans = 0;
        ans = a+b;
        return ans;
}

int main() {

        int a,b;
        cin >> a >> b;

        cout << isSum (a,b);
}
```

Default Parameter :-

```
int ismul ( int a , in b=3) //default
        return a * b;
}
int main () { int a,b;
        cin>>a>>
        cout<<isMul (a);
}
```

empty for b.

Here not passing value of b.

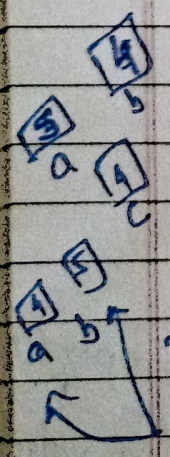
Jo Hum Arguments Pass karte hai vo to
(i) Pass by value (ii) Pass by reference.

Pass by value

Here we create an copy of variables

```
void isSwap(int a, int b)
{
    int c;
    // a = b;
    c = a;
    a = b;
    b = c;
}

int main() {
    int a, b;
    cin >> a >> b;
    isSwap(a, b);
    cout << a << b;
}
```



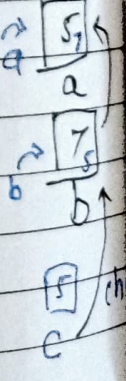
I/P a=4 b=5
O/P a=4 b=5

Pass by reference

We change in original variable direct pass original variable.

```
void isSwap(int &a, int &b)
{
    int c;
    c = a;
    a = b;
    b = c;
}

int main() {
    int a, b;
    cin >> a >> b;
    isSwap(a, b);
    cout << a << b;
}
```



I/P a=5 b=7
O/P a=7 b=5