

C++ Functions Notes (Beginner Friendly)

1. Definition of Function

A function is a block of code that performs a specific task and can be reused.

2. Syntax of Function

```
return_type function_name(parameters)
{
    // code
}
```

3. Function Declaration Example

```
int sum(int, int);
```

4. Function Definition Example

```
int sum(int a, int b)
{
    return a+b;
}
```

5. Function Calling Example

```
int result = sum(5,3);
```

Program: Simple Function Example

```
#include<iostream>
using namespace std;

int sum(int a, int b);

int main(){
    int result = sum(4,6);
    cout<<"Sum = "<<result;
    return 0;
}

int sum(int a, int b){
    return a+b;
}
```

Output:

Sum = 10

Types of Functions

1. No return, no parameters

```
#include<iostream>
using namespace std;

void message(){
    cout<<"Welcome to C++";
}

int main(){
    message();
    return 0;
}
```

Output:

Welcome to C++

2. No return with parameters

```
#include<iostream>
using namespace std;

void sum(int a, int b){
    cout<<"Sum = "<<a+b;
}
```

```

}

int main(){
    sum(5,3);
    return 0;
}

```

Output:
Sum = 8

3. Return with parameters

```

#include<iostream>
using namespace std;

int multiply(int a, int b){
    return a*b;
}

int main(){
    int result = multiply(4,5);
    cout<<"Multiplication = "<<result;
    return 0;
}

```

Output:
Multiplication = 20

Program: Square of Number

```

#include<iostream>
using namespace std;

int square(int n){
    return n*n;
}

int main(){
    int num;
    cout<<"Enter number: ";
    cin>>num;

    cout<<"Square = "<<square(num);
    return 0;
}

```

Output:
Enter number: 5
Square = 25

Program: Even or Odd

```

#include<iostream>
using namespace std;

void check(int n){
    if(n%2==0)
        cout<<"Even number";
    else
        cout<<"Odd number";
}

int main(){
    int num;
    cout<<"Enter number: ";
    cin>>num;

    check(num);
    return 0;
}

```

Program: Maximum of Two Numbers

```
#include<iostream>
using namespace std;

int maxNum(int a,int b){
    if(a>b)
        return a;
    else
        return b;
}

int main(){
    int x,y;
    cout<<"Enter two numbers: ";
    cin>>x>>y;

    cout<<"Maximum = "<<maxNum(x,y);
    return 0;
}
```