

C++ Notes - 25092020

- User defined functions –
 - In programming, function refers to a segment that groups code to perform a specific task. Depending on whether a function is predefined or created by programmer; there are two types of function:
 1. Library Function
 2. User-defined Function
 - **Library Function** – Library functions are the built-in function in C++ programming. Programmer can use library function by invoking function directly; they don't need to write it themselves.
 - **User defined Function** - C++ allows programmer to define their own function. A user-defined function group's code to perform a specific task and that group of code is given a name (identifier). When the function is invoked from any part of program, it all executes the codes defined in the body of function.

Example 1: Library Function –

```
#include<iostream.h>
#include<cmath.h>
void main()
{
    double number, squareRoot;
    cout << "Enter a number: ";
    cin >> number;

    squareRoot = sqrt(number);
    cout << "Square root of " << number << " = " << squareRoot;
}
```

- How user-defined function works in C Programming?

```
#include <iostream>

void function_name() {
    ... ..
    ... ..
}

int main() {
    ... ..
    function_name();
    ... ..
}
```

The diagram illustrates the execution flow between a user-defined function and the main function. A horizontal arrow points from the closing curly brace of the `function_name()` block to the `function_name();` call inside the `main()` block. A vertical line then descends from the call, and a horizontal arrow points back to the opening curly brace of the `function_name()` block, indicating the return path.