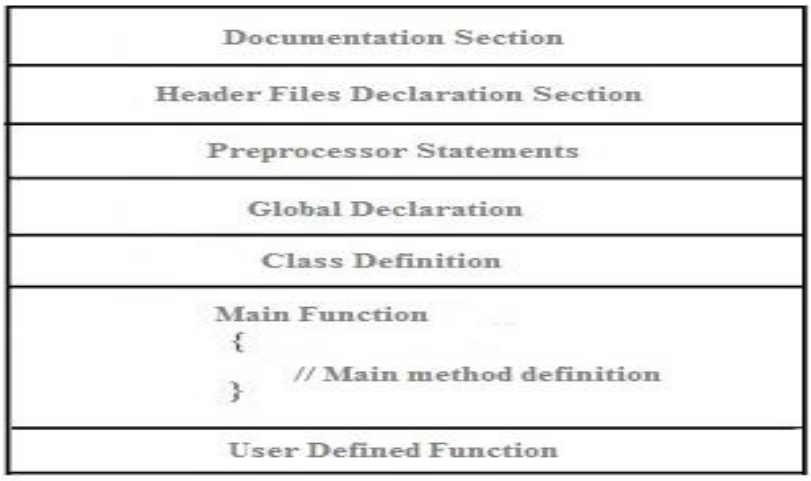
C++ Programming Basics: Basic Program Construction - Output Using cout - Input with cin

- an optional set of pre-processor directives.
- an optional constant and function declaration section.
- a main function containing a declaration section and a statement section.
- additional C++ functions.

A **C++ program** is structured in a specific and particular manner. In C++, a program is divided into the following three sections:

1. Standard Libraries Section
2. Main Function Section
3. Function Body Section



For example, let's look at the implementation of the `Hello World` program:

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

int main() {
  cout << "Hello World!" << endl;
  return 0;
}
```

EXAMPLE PROGRAM

Output Using cout - Input with cin:

C++ I/O operation is using the stream concept. Stream is the sequence of bytes or flow of data. It makes the performance fast.

If bytes flow from main memory to device like printer, display screen, or a network connection, etc, this is called as **output operation.**

If bytes flow from device like printer, display screen, or a network connection, etc to main memory, this is called as **input operation.**

<iostream>	It is used to define the **cout, cin and cerr** objects, which correspond to standard output stream, standard input stream and standard error stream, respectively.

Output Using cout

```
#include <iostream>
using namespace std;
int main( ) {
  int age;
   cout << "Enter your age: ";
   cin >> age;
   cout << "Your age is: " << age << endl;
}
```

Output:

```
Enter your age: 22
Your age is: 22
```

Input with cin:

```
#include <iostream>
using namespace std;
int main( ) {
  int age;
   cout << "Enter your age: ";
     cin >> age;
   cout << "Your age is: " << age << endl;
}
```

Output:

```
Enter your age: 22
Your age is: 22
```