Mind
Map

Questions

Concepts

Ideas

C++ Program Structure ?

C++ Programming

VE DI NESH

Program Structure

Header File

```cpp
#include <iostream>

using namespace std;

int main()   // Program execution begins
{
   cout << "Hello Students";
   return 0;
}
   std::cout << "Hello World";
```

Namespaces

Main

Block

Header Files

#include <iostream>

Header File 1

Header File 2

Program

Predefined classes and functions.
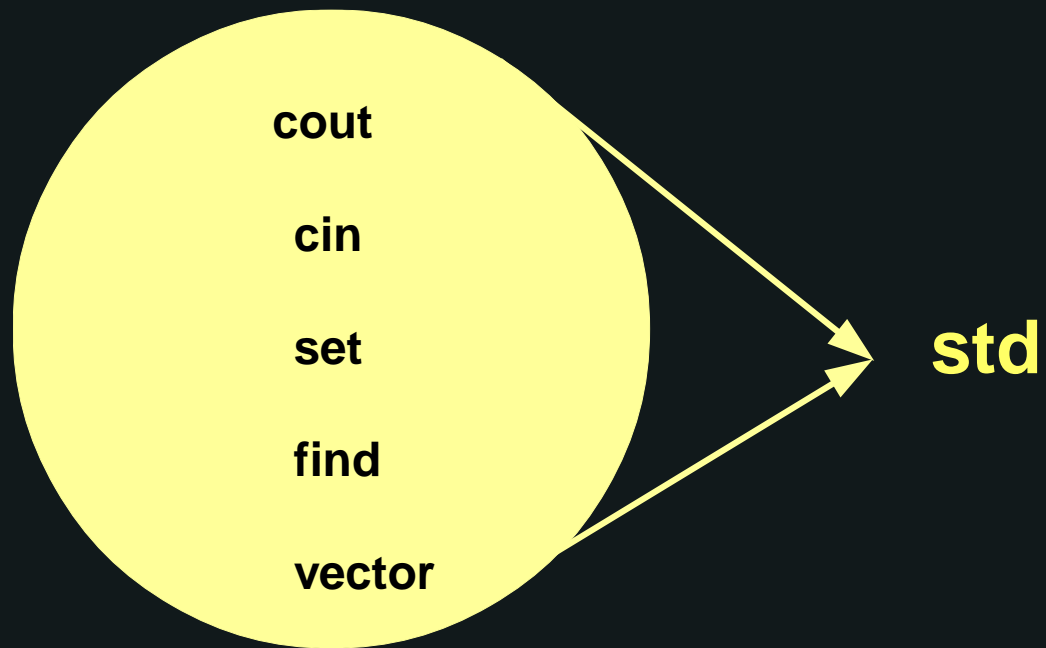
So, you don't need to code from scratch.

```cpp
#include <iostream>

using namespace std;

int main()   // Program execution begins
{
    cout << "Hello Students";
    return 0;
}
```

Namespace

using namespace std;

cout
cin
set
find
vector

std

Namespace :- It allow to group entities like classes, objects and functions under a name.
(like std)

std::cout tells the compiler that you want the "cout" identifier, and that it is in the "std" namespace

main( )

Compiler

```cpp
- - - - - - - - - - - - - - - - -
 Headers
- - - - - - - - - - - - - - - - -


int main ( )
{
    cout << "Hello Students";
    return 0;

}
```

Blocks And Semicolons

```
------------------
  Headers
------------------

int main ( )
{
    cout << "Hello Students";
    return 0;
}
```

In C++, the semicolon is a statement terminator.

Each individual statement must be ended with a semicolon.

cout << "Hello Students";   return 0;

A block is a set of logically connected statements that are surrounded by opening and closing braces

Program

Write a program, to print a message .

Mindmap

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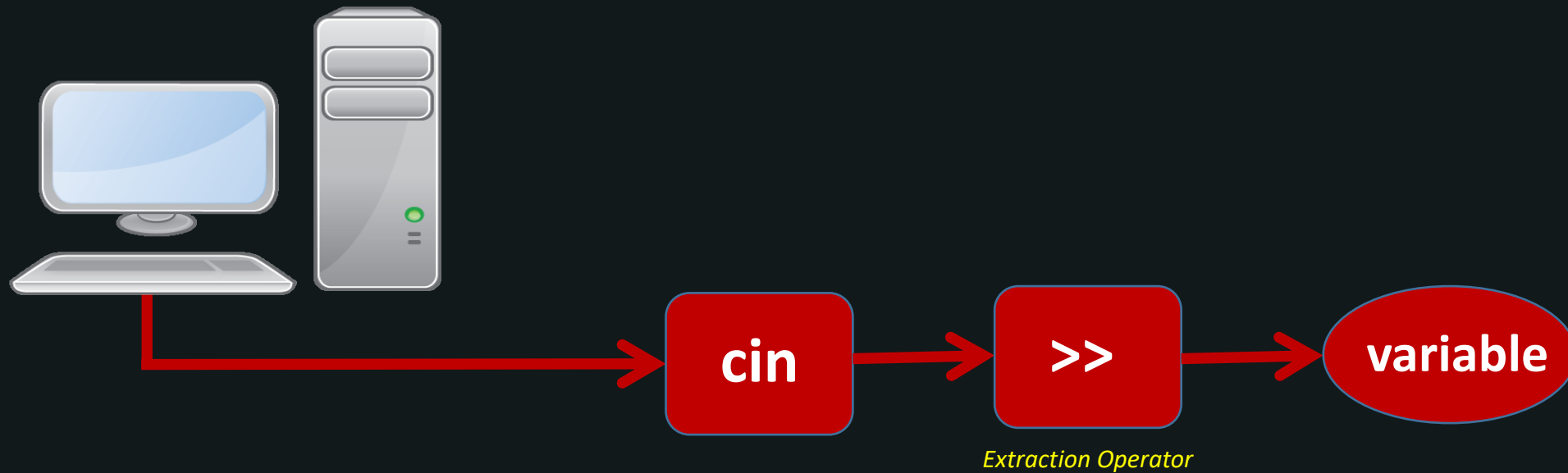
```
#include<iostream>
using namespace std;

int main( )
    {
    // get user data
    // operation
        return 0;
    }
```
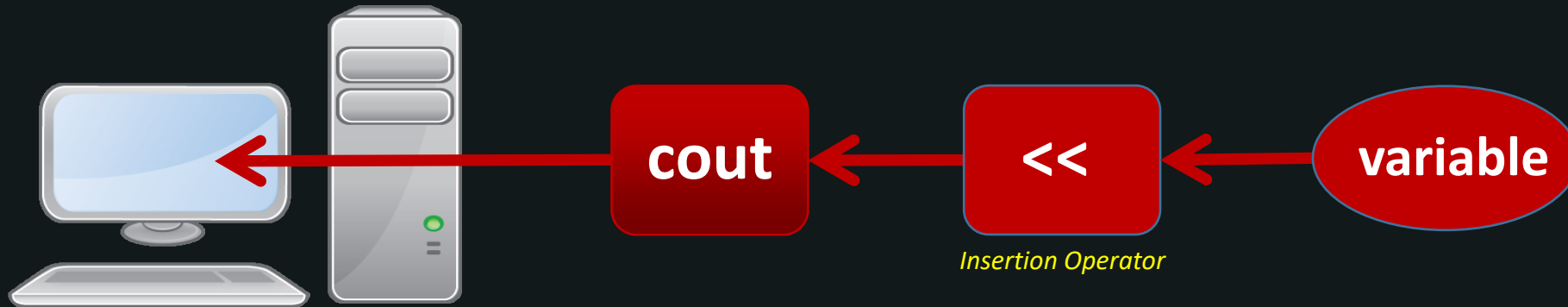
User Input

Output

User Input

cin → **>>** → **variable**

Extraction Operator

It takes the value from the stream object on its left and places it in the variable on its right.

cin >> variable;

Output

cout ← << ← variable

Insertion Operator

It directs the contents of the variable, on its right to the object on it left.

`cout << variable;`

```
int main( )
{
   int age;
   cout << "Enter Your Age";
   cin  >> age;
   cout << age;
}
```

Program

Write a program, to input a number and display square of that number.