Programming on C++ Notes – 24082020

- **Relational Operators –**

☑ **These operators establish a relationship between operands.**

☑ **The relational operators are: less than (<), grater than (>), less than or equal to (<=), greater than equal to (>=), equivalent (==) and not equivalent (!=).**

☑ ***Difference between equal and equivalent* - We must notice that assignment operator is (=) and there is a relational operator, for equivalent (==).**

☑ **These two are different from each other, the assignment operator assigns the value to any variable, whereas equivalent operator is used to compare values, like in if-else conditions**

☑ **Example –**

```
int x = 10;                    // assignment operator
x=5;                           // assignment operator
if(x == 5)                     // relational operator
{
        cout <<"Successfully compared";
}
```

- **Conditional Statement in C++ -**

☑ **In C++ programming, if statement is used to test the condition. There are various types of if statements in C++.**

☑ **Simple If Statement - The C++ if statement tests the condition. It is executed if condition is true.**

☑ **Syntax -**

```
if(condition)
{
        //code to be executed
}
```

- **Source Code of Simple - if statement –**

```
#include<iostream.h>
#include<conio.h>
void main ()
{
        int num = 10;
        if (num % 2 == 0)
        {
```

Conditional Statement in C++ -

- In C++ programming, if statement is used to test the condition. There are various types of if statements in C++.

• Simple if statement	• Nested if-else statement
• if-else statement	• if-else-if ladder

- **Simple If Statement** - The C++ if statement tests the condition. It is executed if condition is true.
- ***Syntax*** -

```
if(condition)
{
    //code to be executed
}
```

Source Code of Simple - if statement -

```
#include<iostream.h>
#include<conio.h>

void main ()
{
        int num = 10;
        if (num % 2 == 0)
        {
           cout<<"It is even number";
        }
}
```

If-else Statement -

- The C++ if-else statement also tests the condition. It executes if block if condition is true otherwise else block is executed.
- ***Syntax –***

```
if(condition)
{
    //code if condition is true
}
else
{
    //code if condition is false
}
```

Source Code of if-else statement -

```
#include<iostream.h>
#include<conio.h>

void main ()
{
        int num = 10;
        if (num % 2 == 0) {
            cout<<"It is even number";
        }
        else {
            cout<<"It is odd number";
        }
}
```

Nested if-else Statement -

- A nested if is an if statement that is the target of another if statement. Nested if statements means an if statement inside another if statement.

- ***Syntax –***

```
if (condition1)
{
        // Executes when condition1 is true

        if (condition2) {
                // Executes when condition2 is true
        }
        else {
                // Executes when condition2 is false
        }
}
```

Source Code of if-else statement -

```
#include<iostream.h>
#include<conio.h>
void main()
{
        int i = 10;
        if (i == 10) {
                if (i < 15) {
                        cout<<"i is smaller than 15";
                }
                if (i < 12) {
                        cout<<"i is smaller than 12 too";
                }
                else {
                        cout<<"i is greater than 15";
                }
        }
}
```

if-else-if ladder Statement -

- *Syntax –*

```
if (condition) {
   //statement;
}
else if (condition) {
   //statement;
}
.
.
.
else {
   //statement;
}
```

Source Code of if-else-if ladder statement -

```
#include<iostream.h>
#include<conio.h>

void main()
{
        int i = 20;

        if (i == 10)
                cout<<"i is 10";
        else if (i == 15)
                cout<<"i is 15";
        else if (i == 20)
                cout<<"i is 20";
        else
                cout<<"i is not present";
}
```