

LAB 04

Summary

Items	Description
Course Title	Programming Fundamentals
Lab Title	Conditional Statement
Duration	3 Hours
Operating System /Tool/Language	Visual Studio
Objective	To get familiar with if else and nested if else statements in C++

Syntax:

```
if ( condition )
{ //statement(s) to be executed if condition is true
    }
else
{ //statement(s) to be executed if condition is not true / false
    }
}
```

Condition is a statement whose result is 0/1 Or True/False or Yes / No
can contain expression / mathematical operator(s) logical operator(s) Assignment operator.
Condition can contain more than one condition

Sample program # 01

```
#include "stdafx.h"
#include<iostream>
using namespace std;

int _tmain(int argc, _TCHAR* argv[])
{cout<<"use of if else statement"<<endl;
int a,b;
cout<<"enter 1st number ?"<<endl;
cin>>a;
cout<<"enter second number?"<<endl;
cin>>b;
if(a>b)
{cout<<" 1st # is > 2nd #"<<endl; }
else
```

```

cout<<"2nd no is greater than first"<<endl;
system("pause");
    return 0;
}

```

Sample program # 02

```

#include "stdafx.h"
#include<iostream>
using namespace std;

int _tmain(int argc, _TCHAR* argv[])
{
cout<<"use of nested if"<<endl;
int a=100,b=200,c=3000;
if(a>b)
{ if(a>c) // (a>b) (a>c)
  cout<<a<<"is largest "<<endl;
  else if (c>b) // (a>b)
    cout<<c<<"is largest"<<endl;
}
else // (b>a)
{
    if (b>c) // (b>a)
        cout<<b<<"is largest"<<endl;
    else //(b>a) (c>b)
        cout<<c<<" is largest"<<endl;
}

system("pause");
    return 0;
}

```

Syntax # 02

(condition)? statement1_if_cond_true : statemnt2_if_cond_false ;

LAB TASKS

TASK # 01

Run both the sample programs, note the output and get familiar with the syntax

TASK # 02

Write a program which take a number from the user and display whether the number is even or odd

Sample Output:

Enter a number? 5
you have entered an odd integer

TASK # 03

Write a C++ code which take three inputs from user, your program should display the smallest value (use nested if)

Sample Output:

Enter 1st value = 10
Enter 2nd value = 2
Enter 3rd value = 5
Smallest number = 2

TASK # 04

Write a program which take 4 unique inputs from the user and find the largest number from them.
(use logical operators for multiple conditions)

Sample Output:

Enter 1st value? 5
Enter 2nd value? 9
Enter 3rd value? 10
Enter 4th value? 3
Largest number = 10

TASK # 05

Create a calculator in C++ which can perform addition, subtraction, multiplication, division
Ask the user to enter the operator first
then ask the user to enter first and then second value

Sample Output:

Please enter the operator which you want to perform? +
please enter first value? 5
Please enter second value? 6
5+6=11

TASK # 06

Write a program to check whether a triangle is valid or not. The three angles of the triangle are entered through the keyboard. A triangle is valid if the sum of all the three angles is equal to 180

degrees.

Use Syntax # 02 of if-else statement for this task

Task # 07

A library charges a fine for every book returned late. For first 7 days late the fine is 10 PKR, for 8-14 days fine is 20PKR and for 15-31 days fine is 50PKR. If you return the book after 31 days your membership will be cancelled. Write a program to accept the number of days from the user and display the fine message or the appropriate message.