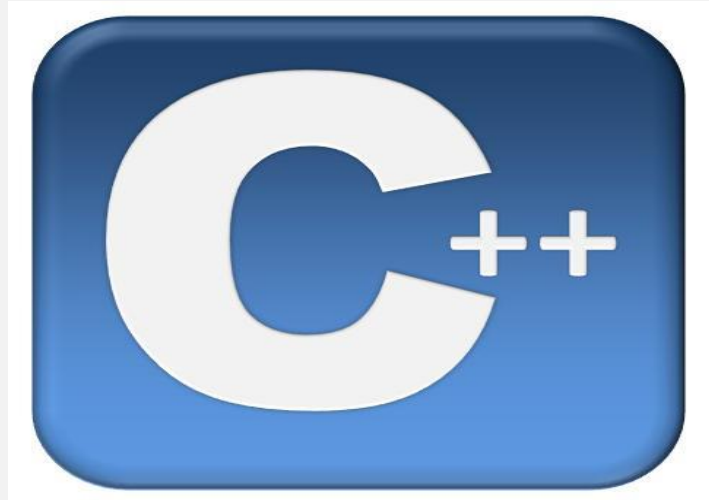# LAB REPORT

C++ PROGAMMING

**PREPARED BY:**

TALHA SHAH

461075

SECTION A

OCTOBER 10, 2023

## TASK:01

Write program that intake student scores as input and assign them grade according to given criteria.

```
// int a;
//
//      cout<<"enter student scores:"<<endl;
// cin>>a;
//
// if((a>90))
//    {
//     cout<<"student grade is A"<<endl;}
//
// else if((a>75)||(a<90))
//      {
//      cout<<"student grade is B"<<endl;}
//   else if((a>60)||(a<75))
//          {cout<<"student grade is C"<<endl;}
// else if((a>45)||(a<60))
//     {cout<<"student grade is D"<<endl;}
//
// else  if(a<45)
// {cout<<"student grade is F"<<endl;}
//
```

The above program takes scores of student as input and assign them grade according to the criteria we define. If and else statement is used and by the help of logical operators we define criteria regarding grades.

## TASK:02

Write program that take integer and determine either if it is even and divisible by 5?

```cpp
#include<iostream>
using namespace std;
int main()
{
//      int number;
//      cout<<"enter number"<<endl;
//      cin>>number;
//
//      if(number%2==0 && number%5==0)
//      {cout<<"number is even and divisible by 5"<<endl;}
//
//      else{
//          cout<<"number is not even and not  divisible by 5"<<endl;}

}
```

In above program we use if else statement and logical operator in program we assign integer and program identify that the Integer enter by user is divisible by 5 and even both for this we use AND operator whose condition is if both condition are true then answer is true and vice versa.

## TASK:03

Write program to check whether user entered year is leap year or not?

```
{
//   int year;
//   cout<<"enter a year"<<endl;
//   cin>>year;
//   if((year%4==0&&year%100!=0)||(year%400==0))
//   {
//   cout<<"its leap year "<<endl;}
//
//   else{
//        cout<<"not a leap year"<<endl;
//   }
```

This program take year from user and by using if else statement to check if it is leap year or not.


## TASK:04

Write program that determine if the student is available for scholarship or not?

```
//   float gpa;
//   int attendence ;
//   cout<<"enter gpa"<<endl;
//   cin>>gpa;
//   cout<<"enter attendence percentage"<<endl;
//   cin>>attendence;
//
//   if(gpa>=3.5&& attendence>=80)
//   {cout<<"eligible for scholarship"<<endl;}
//
//   else{cout<<"not eligible"<<endl;
//   }
```

Above program give eligibility for the scholarship on the basis of GPA and attendance percentage. This info is provided by user to program in which eligibility criteria is also define.

## TASK:05

Write program to show that if the given character is vowel or consonant?

```
//
//char c;
//
//cout<<"enter alphabet"<<endl;
//cin>>c;
//
//if(c=='a'||c=='e'||c=='i'||c=='o'||c=='u')
// {
// cout<<"alphabet; is  vowel"<<endl;}
// else{
//
//      cout<<"alphabet is consonant"<<endl;}

}
```

Any of English alphabet is enter then program will identify either it is vowel or consonant by using logical operator.