Fundamentals of Programming I

Lab 2

Exerscies

- **A school has the following rules for the grading system:**
  a. Below 25 - F
  b. 25 to 45 - E
  c. 45 to 50 - D
  d. 50 to 60 - C
  e. 60 to 80 - B
  f. Above 80 - A
  Ask the user to enter marks and print the corresponding grade.

Exerscies

- **Create a C++ Program to find the positive and negative number**
- **A shop will give a discount of 10% if the cost of the purchased quantity is more than 1000. Ask the user for quantity Suppose, one unit will cost 100. Judge and print the total cost for the user.**
- **Create a C++ Program to Find the Greatest of 3 Numbers**

Exerscies

- Create a C++ program that determines the eligibility of a person to vote based on their age and gender.
- The program checks if the entered age is greater than or equal to 18. If the condition is true, the program prompts the user to enter their gender.
- If the user enters 'M' or 'm' as gender, the program displays "Go to Room-5", indicating that the person is eligible to vote and should go to room number 5.
- If the user enters 'F' or 'f' as gender, the program displays "Go to Room-6", indicating that the person is eligible to vote and should go to room number 6.
- If the user enters any other character as gender, the program displays "Invalid Gender Input".
- If the age entered is less than 18, the program displays "Your Age is Under 18 You are Not Eligible For Vote...".

Code 1

```cpp
#include <iostream>
int main()
{
        using namespace std;
        int marks;
        cout << "Enter marks" << endl;
        cin >> marks;

        if (marks < 25){
                cout << "F" << endl;
        }
        else if(marks >=25 && marks <45){
                cout << "E" << endl;
        }
        else if(marks >=45 && marks <50){
                cout << "D" << endl;
        }
        else if(marks >=50 && marks <60){
                cout << "C" << endl;
        }
        else if(marks >=60 && marks <80){
                cout << "B" << endl;
        }
        else if(marks >=80 && marks <100){
                cout << "A" << endl;
        }
        else{
                cout << "Invalid marks" << endl;
        }
        return 0;
}
```

Code 2

```
#include<iostream>
using namespace std;
int main()
{
int number;
cout<<"Enter any number"<<endl;
cin>>number;
if(number<0)
{
cout<<"Number is negative"<<endl;
}
else
{
cout<<"Number is positive"<<endl;
}
}
```

Code 3

```cpp
#include <iostream>
int main()
{
        using namespace std;
        int quantity,price;
        cout << "Enter quantity" << endl;
        cin >> quantity;
        price = quantity*100;
        if (price>1000){
                cout << "Total cost is " << price-(price*.1) << endl;
        }
        else{
                cout << "Total cost is " << price << endl;
        }
        return 0;
}
```

Code 4

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

int main() {

    double n1, n2, n3;

    cout << "Enter three numbers: ";
    cin >> n1 >> n2 >> n3;

    // check if n1 is greater than n2
    if (n1 >= n2) {

        // if n1 is also greater than n3,
        // then n1 is the largest number
        if (n1 >= n3)
            cout << "Largest number: " << n1;

        // but if n1 is less than n3
        // but n1 is greater than n2
        // then n3 is the largest number
        else
            cout << "Largest number: " << n3;
    }
```

```
    // else, n2 is greater than n1
    else {

        // if n2 is also greater than n3,
        // then n2 is the largest number
        if (n2 >= n3)
            cout << "Largest number: " << n2;

        // but if n2 is less than n3
        // but n2 is greater than n1
        // then n3 is the largest number
        else
            cout << "Largest number: " << n3;
    }

    return 0;
}
```

Code 5

```
int main()
{
    char gender;
    int age;
    cout<<"\nEnter Your Age    : ";
    cin>>age;
    if(age>=18)
    {
        cout<<"\nEnter Your Gender : ";
        cin>>gender;
        if(gender=='M' || gender=='m')
        {
             cout<<"\nGo To Room-5";
        }
        else  if(gender=='F' || gender=='f')
        {
             cout<<"\nGo To Room-6";
        }
        else
        {
            cout<<"\n Invalid Gender Input";
        }
    }
    else
    {
        cout<<"\nYour Age is Under 18 You are Not Eligible For Vote...";
    }
    return 0;
}
```

Thank You !