Assignment : L3

If-Else

Ques : Take 2 integers input and print the greatest of them.

```
 # include <iostream>
using namespace std;
int main(){
int  num1, num2;
cout<<“enter a first number”;
cin>>num1;
cout<<“enter a second number”;
cin>>num2;
if (num1<num2){
cout<<“the greatest number”<<num1<<endl;
}
else{
cout<<“the greatest number”<<num2<<endl;
}
return0;
}
```

Ques : Given the radius of the circle predict whether numerically area of this circle is larger than the circumference or not.

```
#include <iostream>
using namespace std;
int main() {
int radius;
cout << "Enter the radius : ";
cin >> radius;
float area = 3.14 * radius * radius;
float circumference = 2 * 3.14 * radius;
if (area > circumference) cout << "Area is greater than circumference." << endl;
else cout << "Circumference is greater than area." << endl;
return 0;
}
```

Ques : Any year is input through the keyboard. Write a program to determine whether the year is a leap year or not. (Considering leap year occurs after every 4 years)

```
#include <iostream>
using namespace std;
int main() {
int year;
cout << "Enter a year: ";
cin >> year;
if (year % 400 == 0) {
cout << year << " is a leap year.";
}
else if (year % 100 == 0) {
cout << year << " is not a leap year.";
}
else if (year % 4 == 0) {
cout << year << " is a leap year.";
}
// all other years are not leap years
else {
cout << year << " is not a leap year.";
}
return 0;
}
```

Ques : Given the length and breadth of a rectangle, write a program to find whether numerically the area of the rectangle is greater than its perimeter.

```
#include <iostream>
using namespace std;
int main() {
int length, breadth;
cout << "Enter the length and breadth of the rectangle respectively : ";
cin >> length >> breadth;
int area = length * breadth;
int perimeter = 2 * (length + breadth);
if (area > perimeter) cout << "Area is greater than perimeter.";
else cout << "Perimeter is greater than area.";
return 0;
}
```

Ques : Write a program to input sides of a triangle and check whether a triangle is equilateral, scalene or isosceles triangle.

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

int main() {
int side1, side2, side3;

cout << "Please Enter Three Sides of a Triangle = ";
cin >> side1 >> side2 >> side3;

if (side1 == side2 && side2 == side3) {
cout << "This is an Equilateral Triangle";
} else if (side1 == side2 || side2 == side3 || side1 == side3) {
cout << "This is an Isosceles Triangle";
} else
cout << "This is a Scalene Triangle";

return 0;
}
```

Ques : If the marks of A, B and C are input through the keyboard, write a program to determine the student scoring least marks.

```
#include <iostream>

using namespace std;

int main() {
cout << "Enter marks of the students : ";
int a, b, c;
cin >> a >> b >> c;

if (a <= b && a <= c)
cout << "A scores the least marks";

else if (b <= a && b <= c)
cout << "B scores the least marks";

else
cout << "C scores the least marks";

return 0;
}
```

Ques : Given a point (x, y), write a program to find out if it lies on the x-axis, y-axis or at the origin, viz. (0, 0).

```
#include<iostream>

using namespace std;

int main() {
float x, y;
printf("Enter the x-y coordinates of the point : ");
cin >> x >> y;

if (x == 0 && y == 0)
cout << "The point is on the origin.";
if (x == 0 && y != 0)
cout << "The point lie on the y-axis.";
if (x != 0 && y == 0)
cout << "The points lie on the x-axis.";
if (x != 0 && y != 0)
cout << "The points lie on the plane.";
return 0;
}
```

Ques : Given three points (x1, y1), (x2, y2) and (x3, y3), write a program to check if all the three points fall on one straight line.

```
#include <iostream>

using namespace std;
int main() {
float x1, y1, x2, y2, x3, y3, slope1, slope2;

cout << "Enter points (x1, y1)" << endl;
cin >> x1 >> y1;

cout << "Enter points (x2, y2)" << endl;
cin >> x2 >> y2;

cout << "Enter points (x3, y3)" << endl;
cin >> x3 >> y3;

slope1 = (y2 - y1) / (x2 - x1);
slope2 = (y3 - y2) / (x3 - x2);

if (slope1 == slope2) {
cout << "All 3 points lie on the same line";
} else {
cout << "All 3 points do not lie on the same line";
}

return 0;
}
```

Ques : Write a C++ program to input any character and check whether it is the alphabet, digit or special character.

```
#include<iostream>

using namespace std;

int main() {
char ch;
cout << "Enter any character : ";
cin >> ch;

// Alphabet checking condition
if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')) {
cout << ch << " is an Alphabet";
} else if (ch >= '0' && ch <= '9') {
cout << ch << " is a Digit";
} else {
cout << ch << " is a Special Character";
}
return 0;
}
```

Predict the output

```
int main() {
    int a = 500, b, c ;
    if ( a >= 400 )
        b = 300 ;
        c = 200 ;
        cout << "value of b and c are respectively “ <<b<<”
    and ” << c  ;
        return 0;
}
```

Value of b and c are 300 and 200 respectively

THANK YOU