**Assignment : L3**

**If-Else**

**Ques1: Take 2 integers input and print the greatest of them.**

#include <iostream>

using namespace std;

int main()

{

    int num1,num2;

    cout<<"Enter the num1:\n";

    cin>>num1;

    cout<<"Enter the num2:\n";

    cin>>num2;

    if(num1>num2)    {

        cout<<num1<<":num1 is greatest integer";

    }

    else{

        cout<<num2<<":num2 is greatest integer";

    }

}

**.**

**Ques2 : 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(){

    float r,area,circumference;

    cout<<"Enter the radius of circle:\n";

    cin>>r;

    area=2\*3.14\*r\*r;

    circumference =2\*3.14\*r;

    cout<<area<<":is area of circle \n";

    cout<<circumference<<":is cicumference of circle\n";

    if(area>circumference){

        cout<<"area is greater than circumference";

    }

    else{

        cout<<"area is not greater than circumference";

    }

}

**Ques3 : 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 n;

    cout<< "Enter the year to cheak year is leap or not:\n";

    cin>>n;

    if(n%4==0){

        if(n%400==0){

            cout<<"is a leap year";

        }

        else{

            if(n%100==0){

                cout<<n<<": not a leap year";

            }

            else{

                cout<<n<<":is not leap year";

            }

        }

    }

}

**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()

{

    float length,breath,area,perimeter;

    cout<<"Enter the length of rectangle:\n";

    cin>>length;

    cout<<"Enter the breath of rectangle:\n";

    cin>>breath;

    area=length\*breath;

    perimeter=2\*(length\*breath);

    cout<<area<<":area of rectange\n";

    cout<<perimeter<<":perimeter of rectangle\n";

    if(area>perimeter){

        cout<<area<<"Area is grater than perimeter";

    }

    else{

        cout<<"Area is not grater than perimeter";

    }

}

**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(){

    float a,b,c;

    cout<<"Enter the side a:\n";

    cin>>a;

    cout<<"Enter the side b:\n";

    cin>>b;

    cout<<"Enter the side c:\n";

    cin>>c;

    if((a+b>c)&&(a+c>b)&&(b+c>a)){

        if(a == b && b == c){

            cout<<"It is equlateral tringle\n";

        }

    }

    else if((a==b)||(a==c)||(b==c)){

        cout<<"It is isoscalne tringle\n";

    }

    else {

        cout<<"It is sclane tringle\n";

    }

}

**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()

{

    int marksA,marksB,marksC;

    cout<<"Enter the marks of A:\n";

    cin>>marksA;

    cout<<"Enter the marks of B:\n";

    cin>>marksB;

    cout<<"Enter the marks of C:\n";

    cin>>marksC;

    if(marksA<marksB&&marksA<marksC){

        cout<<marksA<<":marksA is least marks\n";

    }

    else if(marksB<marksA&&marksB<marksC){

        cout<<marksB<<":marksB is least marks\n";

    }

    else{

        cout<<marksC<<":marksC ia least marks\n";

    }

}

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

#include <iostream>

using namespace std;

int main(){

    float x,y;

    cout<<"Enter the value of x";

    cin>>x;

    cout<<"Enter the value of y";

    cin>>y;

    if(x==0&&y>0||y<0){

        cout<<"cordinate lies on y axis \n";

    }

   else if(y==0&&x<0||x>0){

        cout<<"cordinate lies on x axis\n";

    }

    else{

        cout<<"cordinate are lies on origin\n";

    }

}

**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;

cout<<"Enter Coordinates of point 1 (x1,y1) : ";

cin>>x1>>y1;

cout<<"Enter Coordinates of point 2 (x2,y2) : ";

cin>>x2>>y2;

cout<<"Enter Coordinates of point 3 (x3,y3) : ";

cin>>x3>>y3;

if((x2 - x1) \* (y3 - y2) == (y2 - y1) \* (x3 - x2)){

cout<<" All the three points fall on one straight line. ";

}

else {

cout<<" All the three points does not fall on one straight line";

}

}

**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()

{

float x1, y1, x2, y2, x3, y3;

cout<<"Enter Coordinates of point 1 (x1,y1) : ";

cin>>x1>>y1;

cout<<"Enter Coordinates of point 2 (x2,y2) : ";

cin>>x2>>y2;

cout<<"Enter Coordinates of point 3 (x3,y3) : ";

cin>>x3>>y3;

if((x2 - x1) \* (y3 - y2) == (y2 - y1) \* (x3 - x2)){

cout<<" All the three points fall on one straight line. ";

}

else {

cout<<" All the three points does not fall on one straight line";

}

}

**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;**

**}**

Ans:- output: Value of b and c are respectively 300 200