**“FUNDAMENTALS OF PROGRAMMING”**

**LAB WORK: 01**

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**ME-15 SECTION B**

* **TASK: 01** **“C++ code to find the factorial of 6”**

#include <iostream>

using namespace std;

int main()

{

int a, b = 1, c;

cout<<"Input value :"<<endl;

cin>>a;

for(c = 1; c<=a; c++)

{ b = b\*c;

}

cout<<"Factorial of number = "<< b<<endl;

return 0;

}

* **TASK: 02** **“C++ program to calculate distance between two points. The values of coordinates should be input by user.”**

#include <iostream>

#include <math.h>

using namespace std;

int main()

{

float x1,y1,x2,y2,dist;

cout<<"Enter x1 coordinate : ";

cin>>x1;

cout<<"Enter y1 coordinate : ";

cin>>y1;

cout<<"Enter x2 coordinate : ";

cin>>x2;

cout<<"Enter y2 coordinate : ";

cin>>y2;

dist = sqrt(pow(x2 - x1,2)+pow(y2 - y1,2));

cout<<"Distance between the given points is = "<<dist<<endl;

return 0;

}

* **TASK: 03** **“C++ code to take length from user in centimeter and convert it into meter and kilometer.”**

#include <iostream>

using namespace std;

int main()

{

float x,y,z;

cout<<"Enter value in cm : ";

cin>>x;

y = x/100;

z = x/100000;

cout<<endl;

cout<<"Value in meters : "<<y<<endl;

cout<<"Value in kilometers : "<<z<<endl;

return 0;

}

* **TASK: 04** **“C++ code that takes values of ‘a’ and ‘b’ from the user and displays result of polynomial 𝑎 2 + 2𝑎𝑏 + 𝑏 2.”**

#include <iostream>

#include <math.h>

using namespace std;

int main()

{

float a,b;

cout<<"Enter value of a : ";

cin>>a;

cout<<"Enter value of b : ";

cin>>b;

double poly = pow(a,2) + (2\*a\*b) + pow(b,2);

cout<<"The required answer is = "<<poly<<endl;

return 0;

}

The End.