

## Fundamentals of programming (lab)

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Assignment: 1


Question:1

```
#include <iostream>

#include<cmath>

using namespace std;

int main ()
{
    int x1,x2,y1,y2;
    cout<<"write x1: ";
    cin>> x1;
    cout<<"write x2: ";
    cin>> x2;
    cout<<"write y1: ";
    cin>>y1;
    cout<<"write y2: ";
    cin>>y2;
    int res;
    cout<<"the distance between two points is ";
    res=(x2-x1)*(x2-x1)+(y2-y1)*(y2-y1);
    cout<<sqrt(res)<<endl;
    return 0;
}
```



```
write x1: 2
write x2:
1
write y1: 3
write y2: 2
the distance between two points is 1.41421

...Program finished with exit code 0
Press ENTER to exit console.□
```

Question:2

```
#include<iostream>

using namespace std;

int main ()
{
    float centimeters;

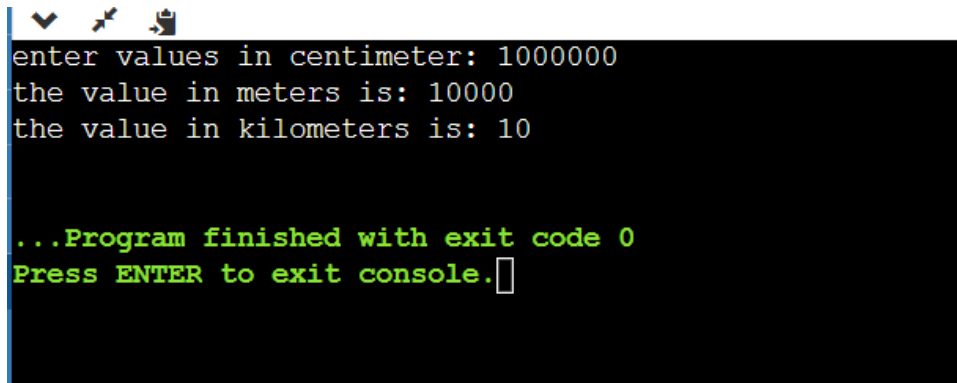
    cout<<"enter values in centimeter: " ;
    cin>>centimeters;

    float meters=centimeters/100;
    float kilometers=centimeters/100000;

    cout<<"the value in meters is: ";
    cout<<meters<<endl;

    cout<<"the value in kilometers is: ";
    cout<<kilometers<<endl;

    return 0;
}
```



```
enter values in centimeter: 1000000
the value in meters is: 10000
the value in kilometers is: 10

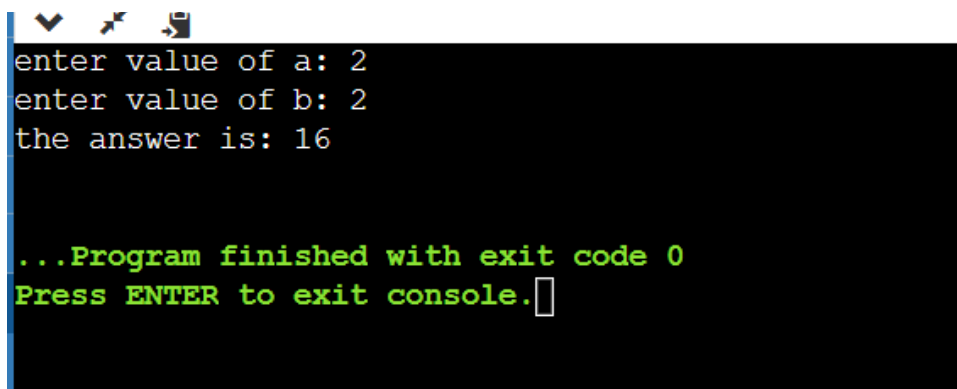
...Program finished with exit code 0
Press ENTER to exit console.
```

Question:3

```
#include<iostream>

using namespace std;

int main()
{
    int a, b, res;
    cout<<"enter value of a: ";
    cin>>a;
    cout<<"enter value of b: ";
    cin>>b;
    cout<<"the answer is: ";
    res=a*a+2*a*b+b*b;
    cout<<res<<endl;
    return 0;
}
```



```
enter value of a: 2
enter value of b: 2
the answer is: 16

...Program finished with exit code 0
Press ENTER to exit console.
```

Question 4:

```
#include<iostream>

using namespace std;

int main()
{
    float fahrenheit, celcius;

    cout<<"enter value in fahrenheit: ";

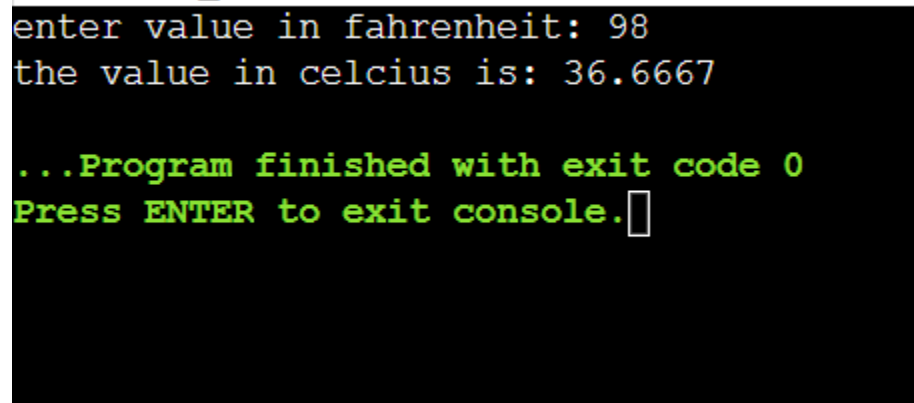

    cin>>fahrenheit;

    celcius= (fahrenheit-32)*5/9;

    cout<<"the value in celcius is: ";

    cout<<celcius;

    return 0;
}
```



```
enter value in fahrenheit: 98
the value in celcius is: 36.6667

...Program finished with exit code 0
Press ENTER to exit console.
```