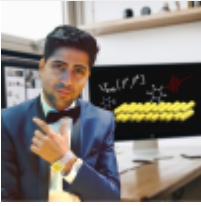


```
//Secant Method for finding the roots of an equation
#include<iostream>
#include<iomanip>
#include<cmath>
using namespace std;
double f(double x);    //declare the function for the given equation
double f(double x)     //define the function here, ie give the equation
{
    double a=pow(x,3)-x-11.0;    //write the equation whose roots are to be determined
    return a;
}
int main()
{
    cout.precision(4);
    cout.setf(ios::fixed);        //set the precision of the output
    double a,b,c,e;
    cout<<"Enter the initial guess\na=";
    cin>>b;
    cout<<"b=\n";                //take an initial guess
    cin>>c;
    cout<<"Enter the degree of accuracy\n";
    cin>>e;                        //take the desired accuracy
    do
    {
        a=b;
        b=c;                      //make b equal to the last calculated value of c
        c=b-(b-a)/(f(b)-f(a))*f(b);    //calculate c
        if (f(c)==0)
        {
            cout<<"\nThe root of the equation is "<<c;    //print the root
            return 0;
        }
    }while(abs(c-b)>=e);            //check if the error is greater than the desired
    accuracy
    cout<<"\nThe root of the equation is "<<c;    //print the root
    return 0;
}
```

```
Enter the initial guess
a=9
b=
10
Enter the degree of accuracy
.0001
```

```
The root of the equation is 2.3736manas@manas-VirtualBox:~/NA$
```

Explanation of the code:



Manas Sharma

I'm a physicist specializing in computational material science with a PhD in Physics from Friedrich-Schiller University Jena, Germany. I write efficient codes for simulating light-matter interactions at atomic scales. I like to develop Physics, DFT, and Machine Learning related apps and software from time to time. Can code in most of the popular languages. I like to share my knowledge in Physics and applications using this Blog and a YouTube channel.

manas.bragitoff.com/



Share this:

[Click to share on Facebook \(Opens in new window\)](#)

[Click to share on Twitter \(Opens in new window\)](#)

[Click to share on WhatsApp \(Opens in new window\)](#)

[Click to share on Pinterest \(Opens in new window\)](#)

[Click to share on Reddit \(Opens in new window\)](#)

[Click to share on LinkedIn \(Opens in new window\)](#)

[Click to email a link to a friend \(Opens in new window\)](#)

[Click to print \(Opens in new window\)](#)

[Click to share on Tumblr \(Opens in new window\)](#)

[Click to share on Pocket \(Opens in new window\)](#)

[Click to share on Telegram \(Opens in new window\)](#)

[wpedon id="7041" align="center"]