

```

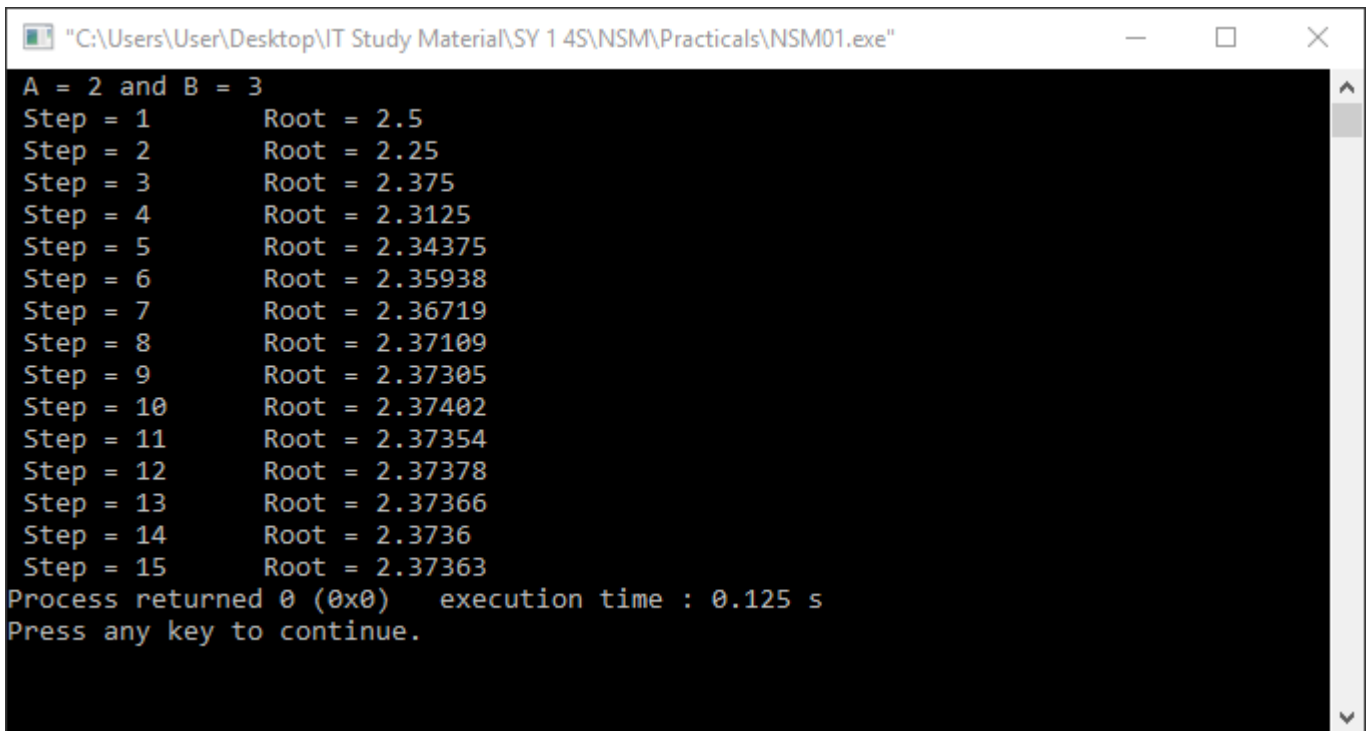
//Program for Bisection method
#include<iostream>
#include<math.h>
using namespace std;
#define f(x) ((x*x*x)-x-11)
int main()
{
    long double a,b,x0,x=0.0;
    if(f(x)<0.000000)
    {
        while(1)
        {
            if(f(x)>0.000000)
            {
                b=x--;
                a=x;
                break;
            }
            x++;
        }
        cout<<" A = "<<a<<" and B = "<<b;
        for(int i=0;i<15;i++)
        {
            x0=((a+b)/2);
            if(f(x0)<0.000000)
                a=x0;
            else
                b=x0;
            cout<<"\n Step = "<<i+1<<"\tRoot = "<<x0;
        }
    }
    else
    {
        while(1)
        {
            if(f(x)<0.000000)
            {
                a=x--;
                b=x;
                break;
            }
        }
    }
}

```

```

        x++;
    }
    cout<<" A = "<<a<<" and B = "<<b;
    for(int i=0;i<15;i++)
    {
        x0=((a+b)/2);
        if(f(x0)<0.000000)
            a=x0;
        else
            b=x0;
        cout<<"\n Step "<<i+1<<" Root = "<<x0;
    }
}
return 0;
}

```



```

"C:\Users\User\Desktop\IT Study Material\SY 1 4S\NSM\Practicals\NSM01.exe"
A = 2 and B = 3
Step = 1      Root = 2.5
Step = 2      Root = 2.25
Step = 3      Root = 2.375
Step = 4      Root = 2.3125
Step = 5      Root = 2.34375
Step = 6      Root = 2.35938
Step = 7      Root = 2.36719
Step = 8      Root = 2.37109
Step = 9      Root = 2.37305
Step = 10     Root = 2.37402
Step = 11     Root = 2.37354
Step = 12     Root = 2.37378
Step = 13     Root = 2.37366
Step = 14     Root = 2.3736
Step = 15     Root = 2.37363
Process returned 0 (0x0)   execution time : 0.125 s
Press any key to continue.

```