

Code:-

```
1 x = linspace(0, 10, 50);
2 y = x.^10 - 1;
3 x1 = 0;
4 xu = 1.3;
5 err = 0.01;
6 iter = 1;
7 while abs(xu-x1)>err
8     xr = (x1+xu)/2;
9     y1 = x1.^10 - 1;
10    yr = xr.^10 - 1;
11    yu = xu.^10 - 1;
12    if y1*yr < 0
13        xu = xr;
14    else
15        x1 = xr;
16    end
17    iter = iter + 1;
18 end
19 fprintf('root of equation = %f',xr);
20 plot(x,y);
```

Result :-

```
>> LAB5
root of equation = 1.000391
```

