ASSIGNMENT NO:-

PROGRAM NO:-

```
%Program: BISECTION METHOD
%Name:
%Roll No.:
%I/P: Function, upper limit,lowerlimit,accuracy

function []=PSJ_BS(fun,x1,x2,acc)
y1=feval(fun,x1);
y2=feval(fun,x2);
while (y1*y2)>0
x1=input('Enter value of x1\n');
x2=input('Enter value of x2\n');
    y1=feval(fun,x1);
    y2=feval(fun,x2);
end
while abs(x1-x2)>acc
x0=(x1+x2)/2;
    y0=feval(fun,x0);
if y1*y0<0
x2=x0;
      y2=feval(fun,x0);
else x1=x0;
      y1=feval(fun,x0);
end
end
x0=(x1+x2)/2;
fprintf('The root of eqn is %f\n',x0);

% PSJ_BS(@(x) x^3-2*x-5,2,3,0.01)
% The root of eqn is 2.097656
% fzero(@(x) x^3-2*x-5,2)
%
% ans =
%
%     2.0946
```