output — name of the function — can be found in website.

```
function [fp,x]=fixedpoint(g,x0,itmax,tol)

% [fp,x]=fixedpoint(g,x0,itmax,tol)
% Input:
%      g      : function
%      x0     : initial point for iteration
%      itmax  : max number of iterations
%      tol    : tolerance for stopping criterion
% Output:
%      fp     : approximation of fixed point
%      x      : array with record of entire iteration

x(1)=x0;
for i=1:itmax
    x(i+1)=g(x(i));
    if abs(x(i+1)-x(i))<tol
        fp=x(i+1);
        return
    end
end
fp=x(end);
display('Last iteration reached without convergence')
return
```

input

help lines

comment

loop = iterations

X is an array

$x_{i+1} = g(x_i)$

$|x_{i+1} - x_i| < tol$

leave the program

last component of the array X