**EXPERIMENT – 2**

AIM : To check the convergence of given series

Code :

clc;

clf;

clear;

s = input("Enter the expression of x : ", "string");

tolerance = 0.01;

x = 100000;

N = 100;

prevValue = evstr(s);

x = x \*\* 2;

curValue = evstr(s);

dif = abs(curValue - prevValue);

disp(dif)

if dif < tolerance then

disp("Convergent");

else

disp("Non Convergent");

end

func = zeros(1, N);

converged = zeros(1, N-1);

for x = 1 : N

func(x) = evstr(s);

if x ~= 1 then

converged(x-1) = sum(func);

end

end

subplot(2,1,1)

plot(1:N, func)

subplot(2,1,2)

plot(1:N-1, converged)