Experiment -10

clear;

clf;

clc;

x = 0:0.01:5;

f = log(x);

taylorSeries = zeros(x);

for i= 1:10

taylorSeries = taylorSeries + ((x-1).^i)\*((-1).^(i-1))/factorial(i)

disp( taylorSeries)

end

plot(x, f, 'r', 'LineWidth', 2);

xlabel("x-axis");

ylabel("y-axis");

title("Exponential Function and its Taylor Series Approximation");

legend("Lograthemic Function");

plot(x, taylorSeries, 'b--', 'LineWidth', 2);

legend(["Exponential Function", "Taylor Series Approximation"]);