//MAKE SURE YOUR DIRECTORY CONTAINS ALL THE FILES IN 'LINEAR REGRESSION'

STEP 1 - Open octave terminal

STEP 2 - check your directory using (pwd) and if your files(files in this folder) are not in the default directory then change your directory using (cd) or add files in default directory

STEP 2 - load your data in the octave.

using >> data = load('ex1data1.txt')

STEP 3 - create X,y and theta

using >> X = data(:,1)

// Here colon means everything from column '1'

y = data(:,2)

// Here colon means everything from column '2'

theta = zeros(2,1)

STEP 4 - use plot_data method

using >> plot_data(X,y)

STEP 5 - To calculate cost function add another column of 1's in X, so that it can be multiplied by theta

using >> [m,n] = size(X)

X = [ones(m,1),data(:,1)]

cost_function(X,y,theta)

STEP 6 - Calculate theta(Parameter) by Gradient Discent

using >> alpha = 0.01(can be changed by you)

iteration = 1500(can be changed by you)

theta = GD(X,y,theta,alpha,iteration)

STEP 7 - Now plot the graph of Linear regression over the graph

using >> hold on (used to plot over existing figure)

```
plot(X(:,2), X*theta,'-')

legend('Training data', 'Linear regression')
```