1. Write the gradient descent optimization code for minimizing f(x) = x^2 + 1 and find value of x for which f(x) is minimum.  
  
2. Use data in files "ex2data1-logistic.xls" and "ex2data2-logistic.xls" to perform logistic regression for each these data sets. Use 90% data points each set for training the regressor and remaining 10% for testing the accuracy of classification.  
  
3. For testing the convexity / non-convexity of the cost function, consider one example from the first dataset. Now plot the cost function by varying the values of parameters (\theta) for (a) linear regression cost and (b) logistic regression cost. Note that the hypothesis to be used is the sigmoid function in both the cases.  
  
  
  
**Deadline: 16th Feb. 2016**  
Note: If you wish to submit multiple files (pdf file, code) then please compress them into a single .zip file. You will be now asked to enter their (a) First Name, (b) Last Name, (c) email address. Here, enter your ID under "First Name", Name under "Last Name" and email under "Email address". The ID and name are important as these will be used to identify the file. While this was done correctly by most of you, those who did not do it correctly need to strictly follow this practice.