1. What is the difference between Vectors and Matrices?
   1. A vector is a row or column of numbers (r x 1, c x 1)
   2. A matrix is a 2 dimensional vector (m x n)
2. What are the assumptions of a Linear Regression?
   1. No multi collinearity
   2. The relationship between independent and dependent variable is linear
   3. The residuals of a linear regression follows normal distribution
3. Gradient Descent is an optimization algorithm
4. For linear regression, a mean squared error is a convex function and that is why Gradient Descent helps to optimize the cost function by subtraction.
5. Logistic Regression is a binary classification algorithm.
   1. 1/1+expt
   2. Cost function =
6. Softmax Regression is a multinomial classification algorithm

