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# Exp 2: Implementation of Gradient Descent Algorithm

**AIM:** To Understand and Implement the Gradient Descent Algorithm.

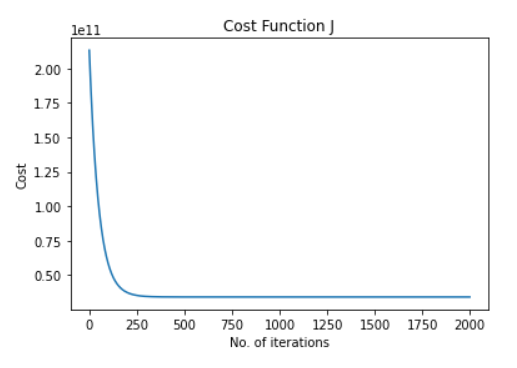
**Problem Description:**

Gradient descent is an iterative machine learning optimization algorithm to reduce the cost function so that we have models that make accurate predictions. With a proper dataset, we can predict the selling price of houses in our city. Various algorithms can be used to predict the selling price but it might not be accurate. To improve the accuracy and get optimized weights to train the model can be derived from Gradient Descent Algorithm. So here we will plot the cost function for the House Price dataset.

**Procedure:**

1. Import the required Libraries
2. Import and Load the Dataset
3. Scale the predictor variable
4. Set the parameters like alpha(step size), no. of iterations, m(no. of data points), random seed, and theta(initial value to start with)
5. Pass the parameters in the Gradient Descent Algorithm method() which will return past thetas and past costs
6. Print the Results
7. Plot the Cost function.

**Results:**

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