**Predictive Modeling with Linear Regression**

**Experiment 1**

1. Read data from the csv file
2. Inspect data
3. Select input set and output set from the given data
4. Reshape input set as a 2d array
5. Split input and output sets into training and testing sets with sizes in the ratio 80:20 respectively
6. Build a linear regression model
7. Train the model by fitting with the input and output samples in the training set
8. Use the trained model for predicting output for the input samples in the test set
9. Calculate the R2score for the predicted output values and the actual output values in the test-set
10. Also, draw scatter plot showing the predicted output and actual output for the input values from the test-set

**Experiment 2**

1. Use random\_state parameter while splitting input and output sets into training and testing sets
2. For random\_state values from 1 to 50, record R2 score and find the maximum R2 score and the corresponding random\_state value
3. Also, print the value of ‘m’ and ‘c’ of the regression line

**Experiment 3**

1. Define a function which will take an input value and print the predicted output value using the trained model