**Assignment 5 : Simple Linear Regression**

**Task 1**

**Import Required Libraries.**

**Task 2**

**Loading the dataset**

1. Load csv file into dataset object (House\_rent\_DataSet)
2. Display dataset

**Task 3**

**Data Visualization**

1. Identify independent and dependent variables.
2. Create a scatter plot to visualize the relationship between independent and dependent variable

**Task 4**

**Data Preprocessing**

1. Separate the data into input feature (x) and target variable (y)
2. Split the data set into training and testing sets using ‘**train\_test\_split’** from **‘sklearn.model\_selection’**

**Task 5**

**Creating and Training the model**

1. Create a LinearRegression model using **LinearRegression()** from **sklearn.linear\_model**.
2. Train the model using the training data (X\_train, y\_train).

**Task 6**

**Making the predictions**

1. Use the trained model to make predictions on the test data (x\_test).
2. Display model’s predictions for each data point in x\_test
3. Calculate and print the model's coefficient and intercept.

**Task 7**

**Visualizing the regression line**

1. Create a scatter plot of the test data points.(x\_test,y\_test)
2. Plot the regression line (predicted values) over the scatter plot.(x\_test, predicted values)
3. Add labels to axes and a title to the plot.