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1. Laboratory project details (Problem Statement):

Use the following supermarket sales dataset to develop a linear regression model to forecast the sales of all items in the 1st quarter of 2025.

2. Language Chosen: Python

3. Framework and libraries used to implement: Numpy, Pandas, Matplotlib, Scikit-learn

4. Dataset used (link): https://www.kaggle.com/datasets/aungpyaeap/supermarket-sales

5. Codebase Developed (please share files using google drive or github):

6. Results obtained:   
The predicted sales for January, February, and March 2025 is [84983.241 97219.374 109455.507].

7. Conclusions and Lessons learnt:

* The linear regression model provides a simple method to predict sales based on historical patterns. However, it assumes a linear relationship between time and sales, which may not capture non-linear trends or seasonality effectively.
* The results will depend on the quality and size of the historical dataset. If historical data contains seasonal fluctuations or anomalies, predictions may deviate.