PHASE 3

PRODUCT DEMAND PREDICTION WITH MACHINE LEARNING

Dataset and its detail Explanation :

Product ID :

A product ID is a unique number or code assigned to a specific product to distinguish it from others, often used for inventory management, ordering, and product lookup.

Store ID :

A store ID is a unique number or code assigned to a specific retail location or online store to distinguish it from other stores within the same company or network.

Total Price at Which Product Was Sold :

The total price at which a product was sold refers to the complete amount of money for which a product was purchased, inclusive of any taxes, fees, or additional charges.

Base Price at Which Product Was Sold :

The base price at which a product was sold refers to the initial cost of the product before any additional charges, taxes, discounts, or fees are applied.

Units Sold (Quantity Demanded) :

Units sold refers to the total number of individual items or quantities of a product that have been purchased by customers over a specified period.

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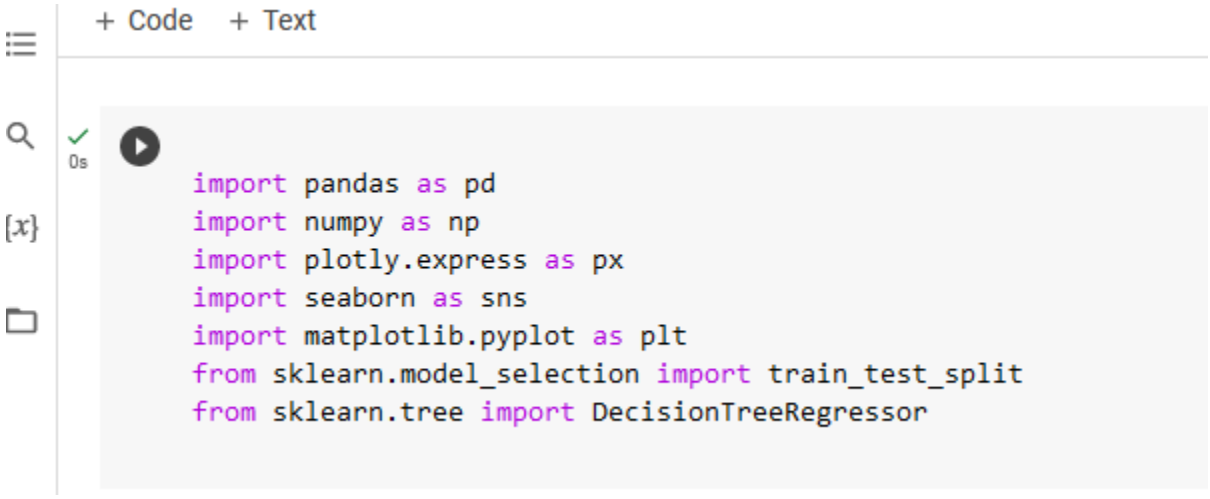
Begin building the project by load the dataset :

Importing the packages:



```
+ Code  + Text

import pandas as pd
import numpy as np
import plotly.express as px
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeRegressor
```

```
data = pd.read_csv("https://raw.githubusercontent.com/amankharwal/Website-data/master/demand.csv")
data.head()
```

	ID	Store ID	Total Price	Base Price	Units Sold
0	1	8091	99.0375	111.8625	20
1	2	8091	99.0375	99.0375	28
2	3	8091	133.9500	133.9500	19
3	4	8091	133.9500	133.9500	44
4	5	8091	141.0750	141.0750	52

Preprocess Dataset :

Now lets have a look at whether this dataset contains any null values or not.

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```
data.isnull().sum()
```

```
ID            0
Store ID      0
Total Price   1
Base Price    0
Units Sold    0
dtype: int64
```