**Program 1**

**Write a python program to import and export data using pandas library functions?**

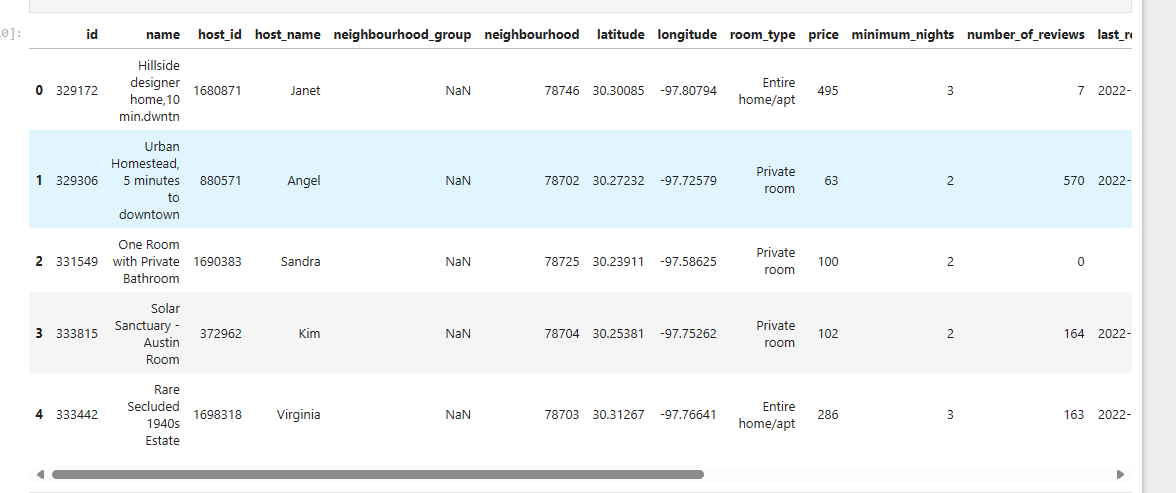
**Code:**

**Import**

import pandas as pd

airbnb\_data = pd.read\_csv("listings (1).csv")

airbnb\_data.head()



**Export**

airbnb\_data.to\_csv("list2.csv")

**Reading the file from the URL:**

url = "https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data"

col\_names = ["sepal\_length\_in\_cm",

"sepal\_width\_in\_cm",

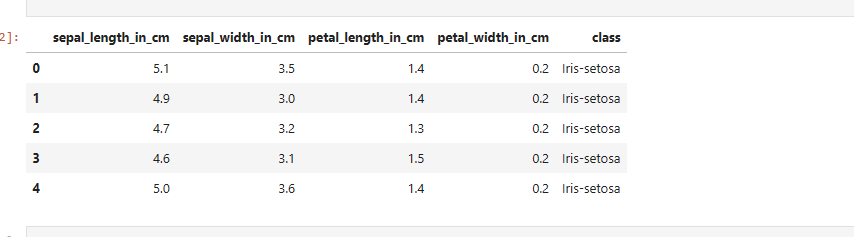
"petal\_length\_in\_cm",

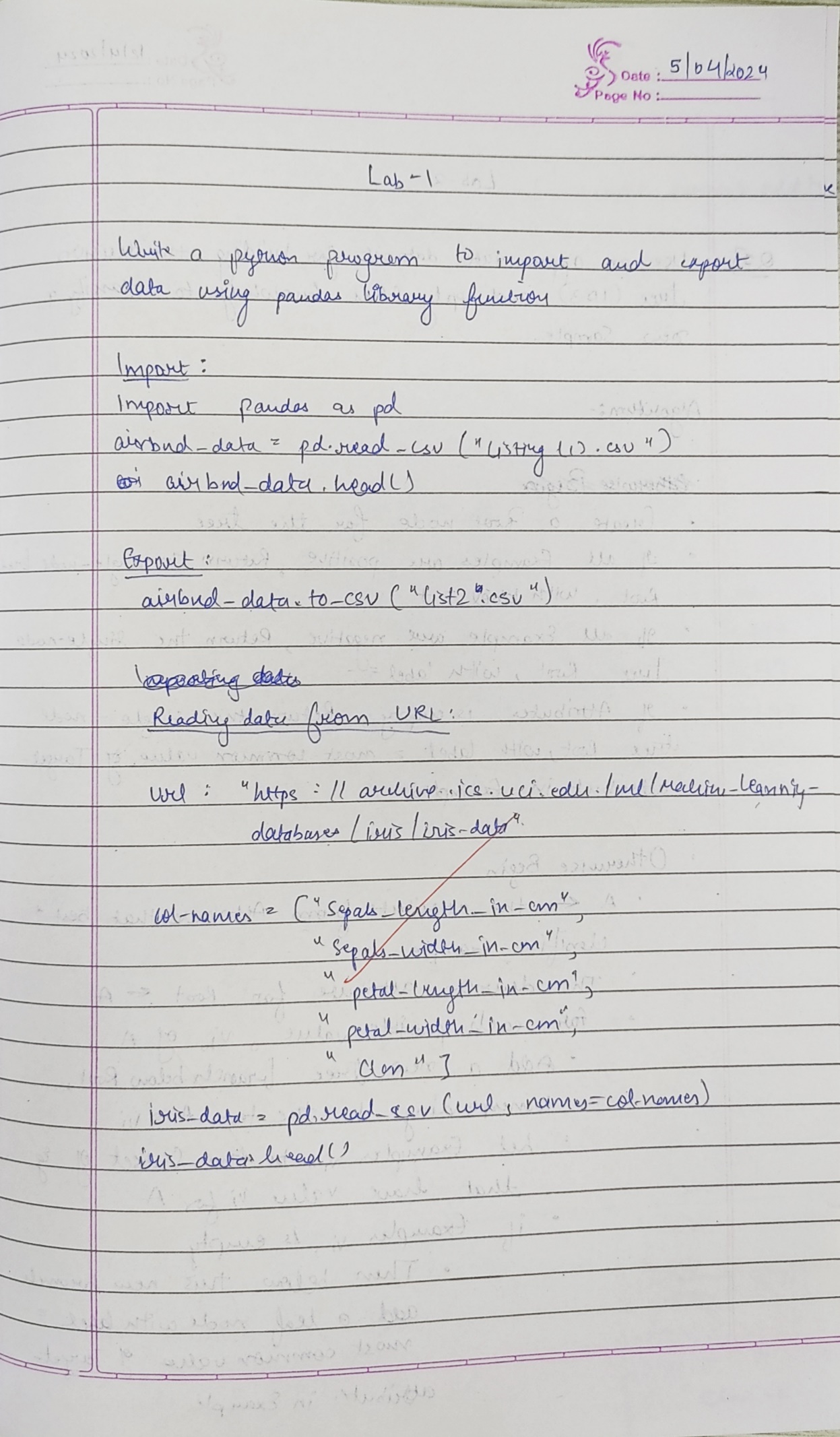
"petal\_width\_in\_cm",

"class"]

iris\_data = pd.read\_csv(url, names=col\_names)

iris\_data.head()

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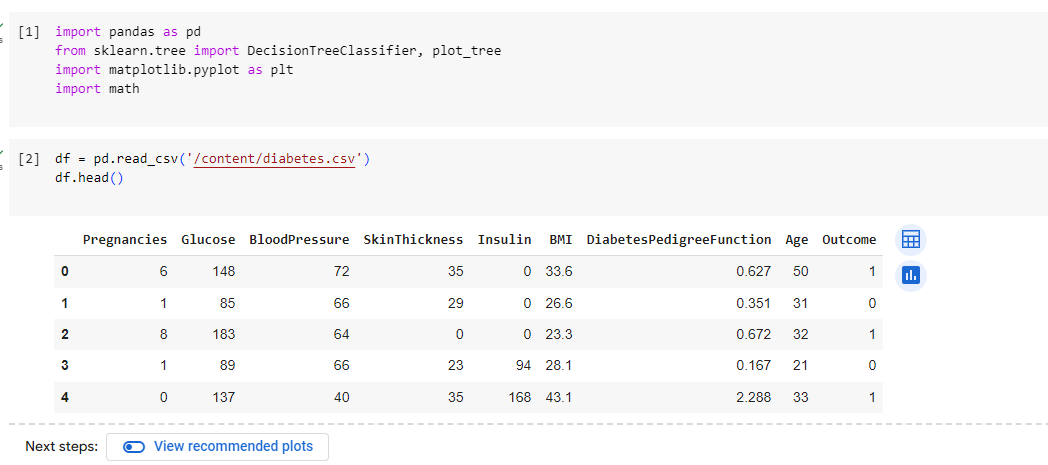
**Screenshot from the lab record:**

**Program 2**

**Use an appropriate data set for building the decision tree (ID3) and apply**

**this knowledge to classify a new sample?**

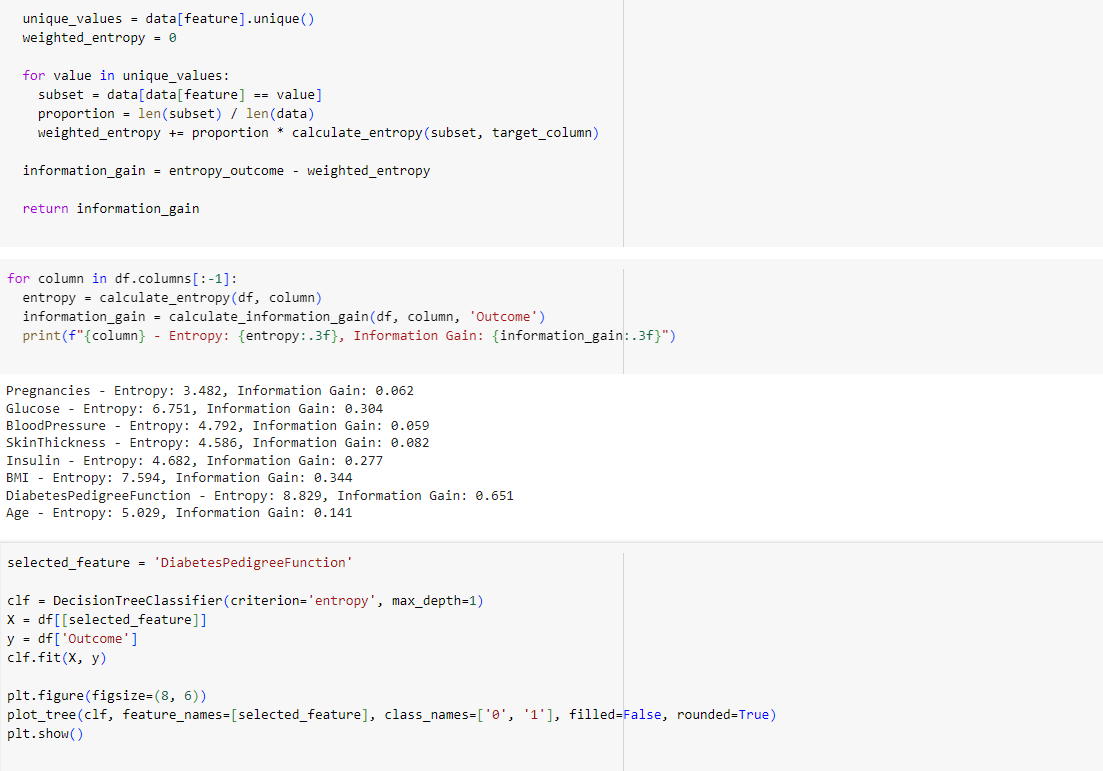
**1.importing database**

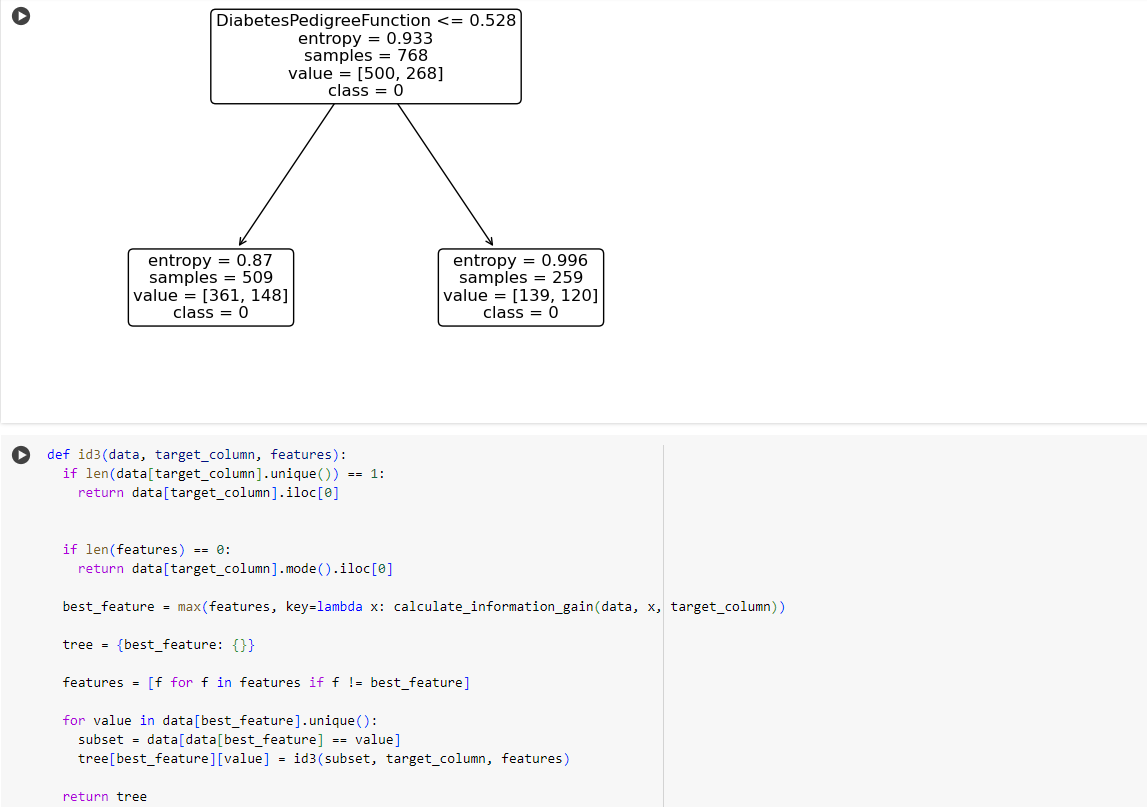
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**2.Calculating entropy and information gain.**

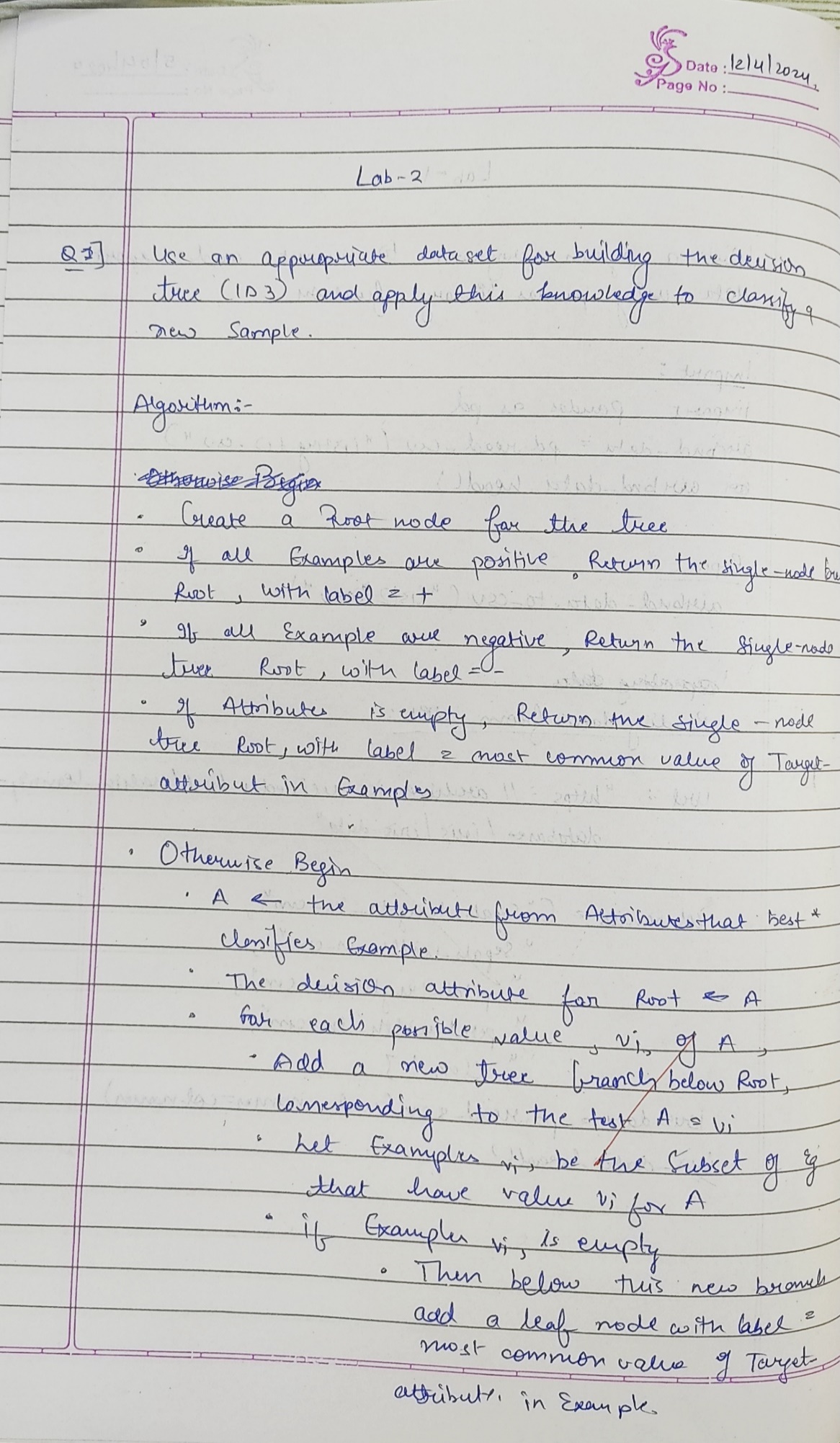
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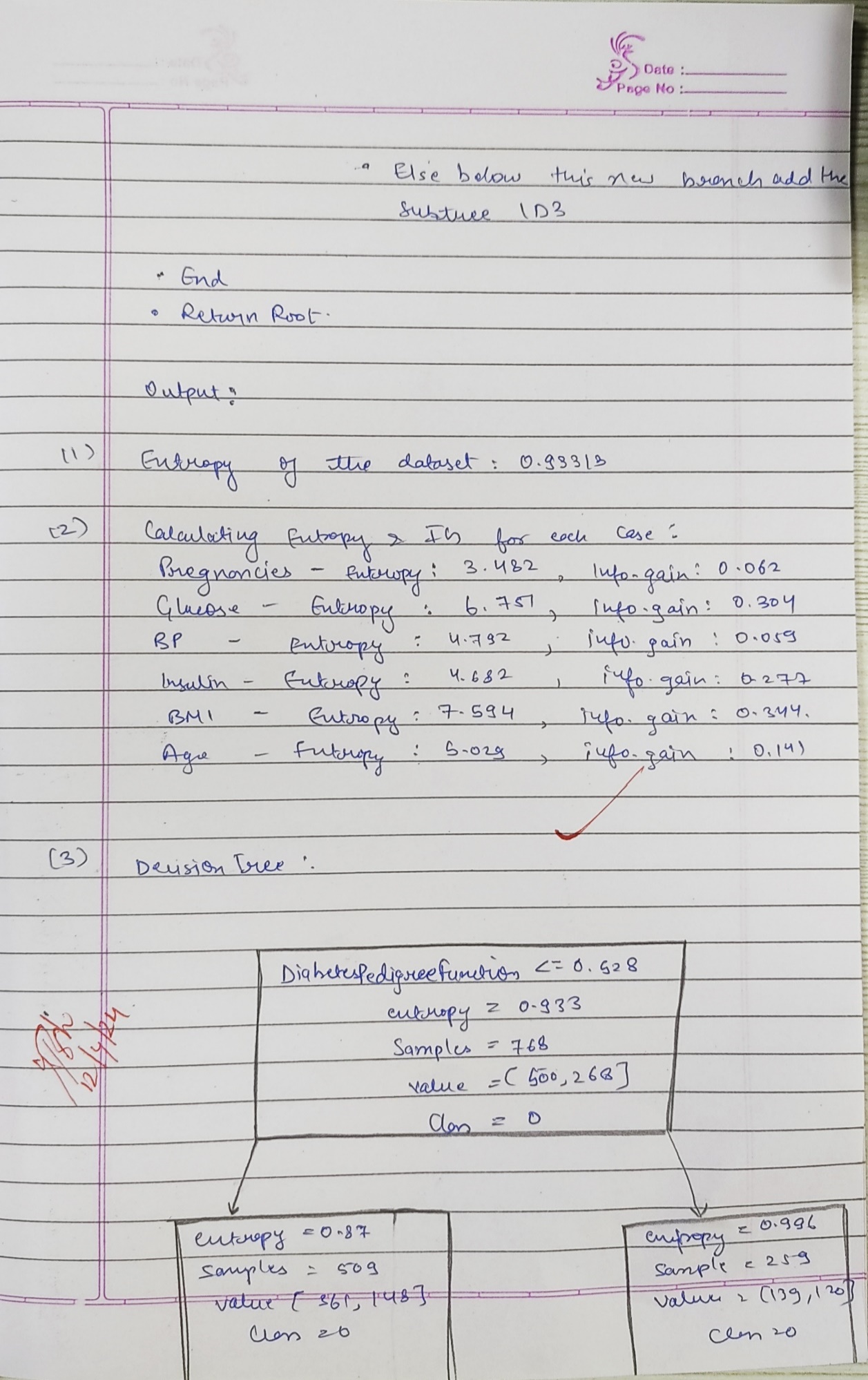
**3. Making Decision tree.**

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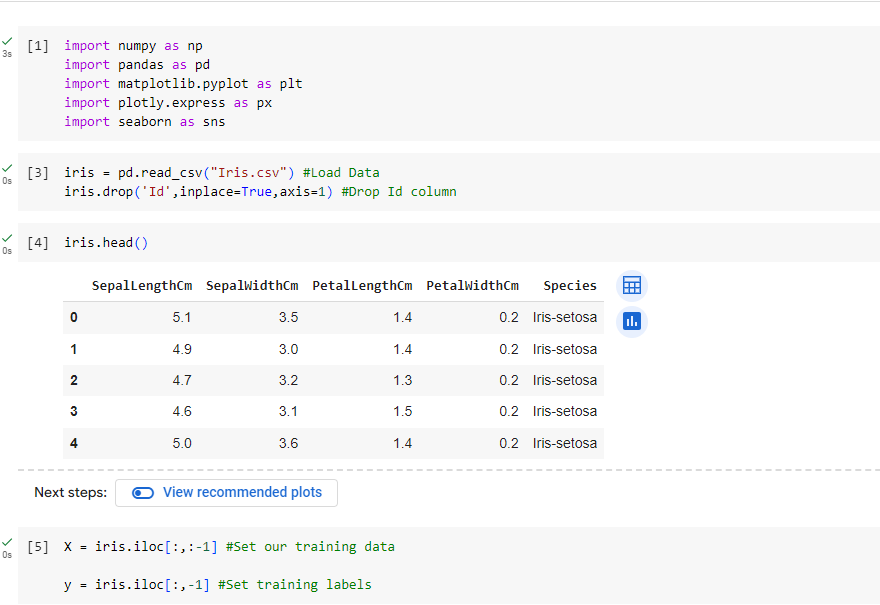
**4.snapshot**

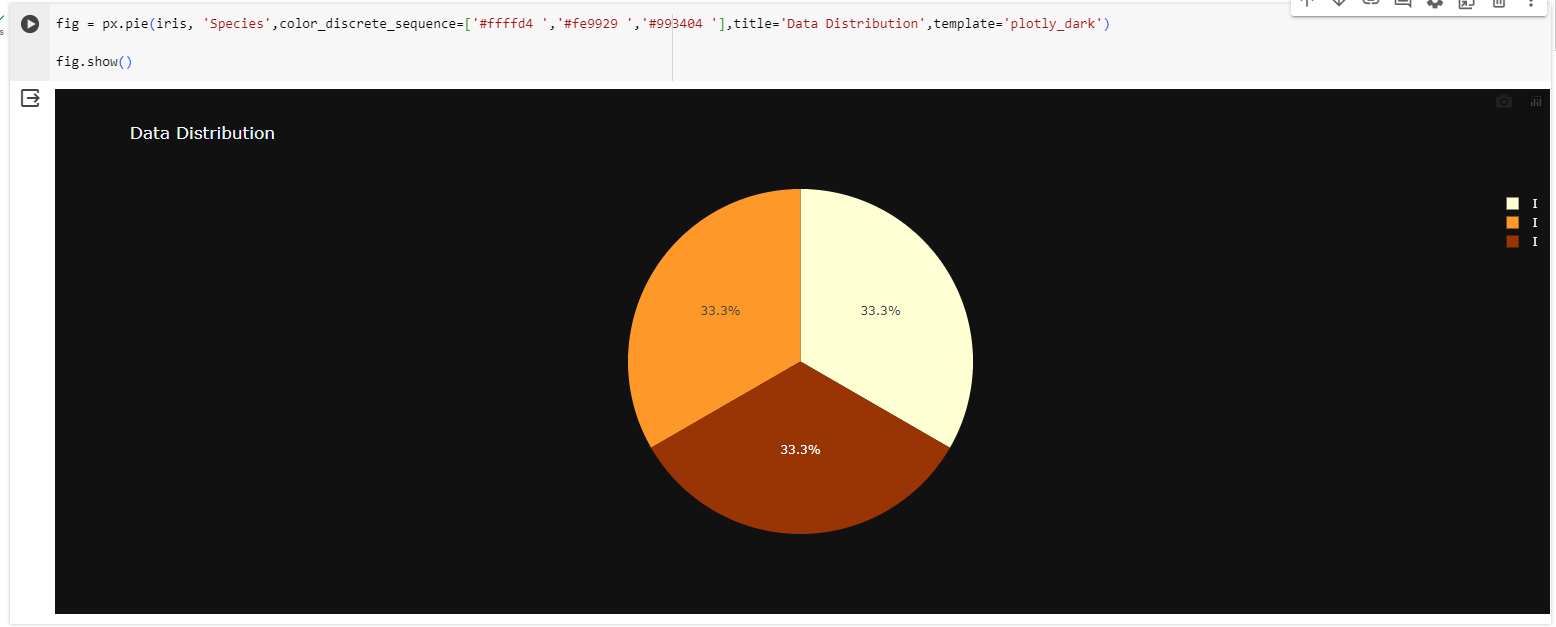


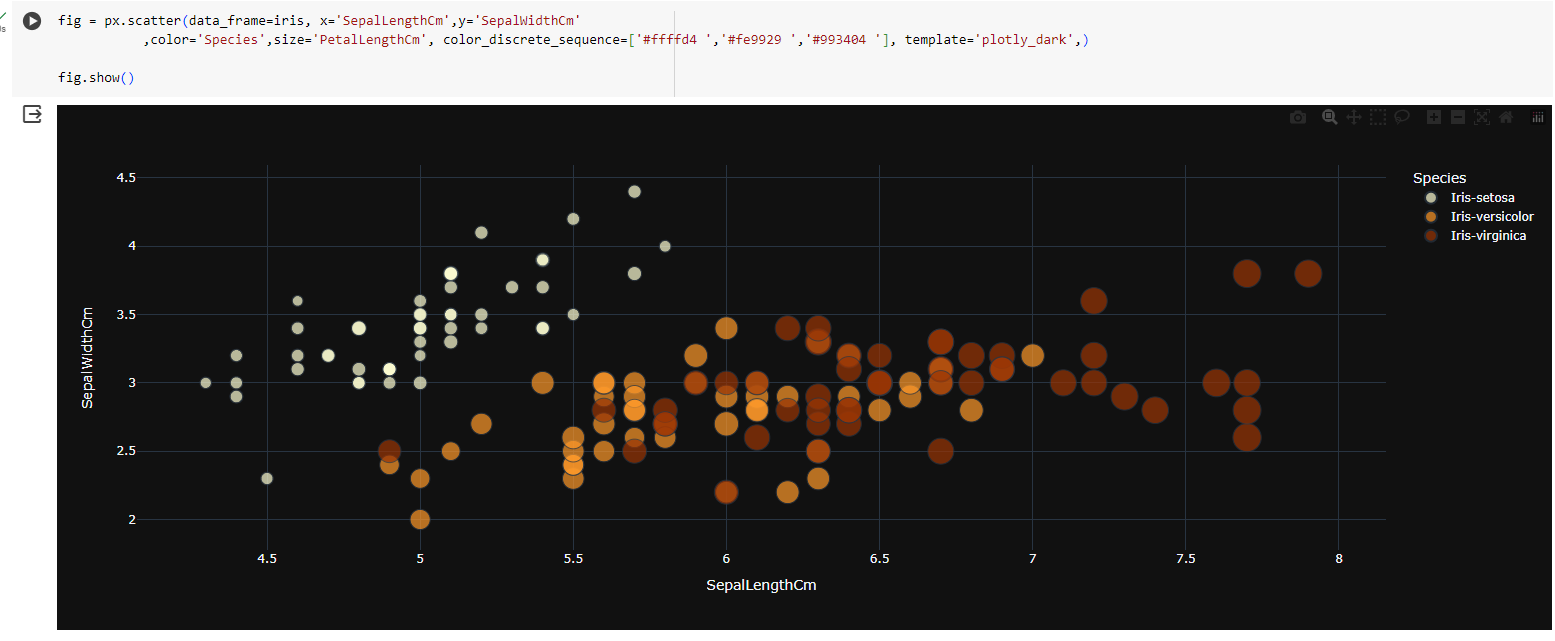


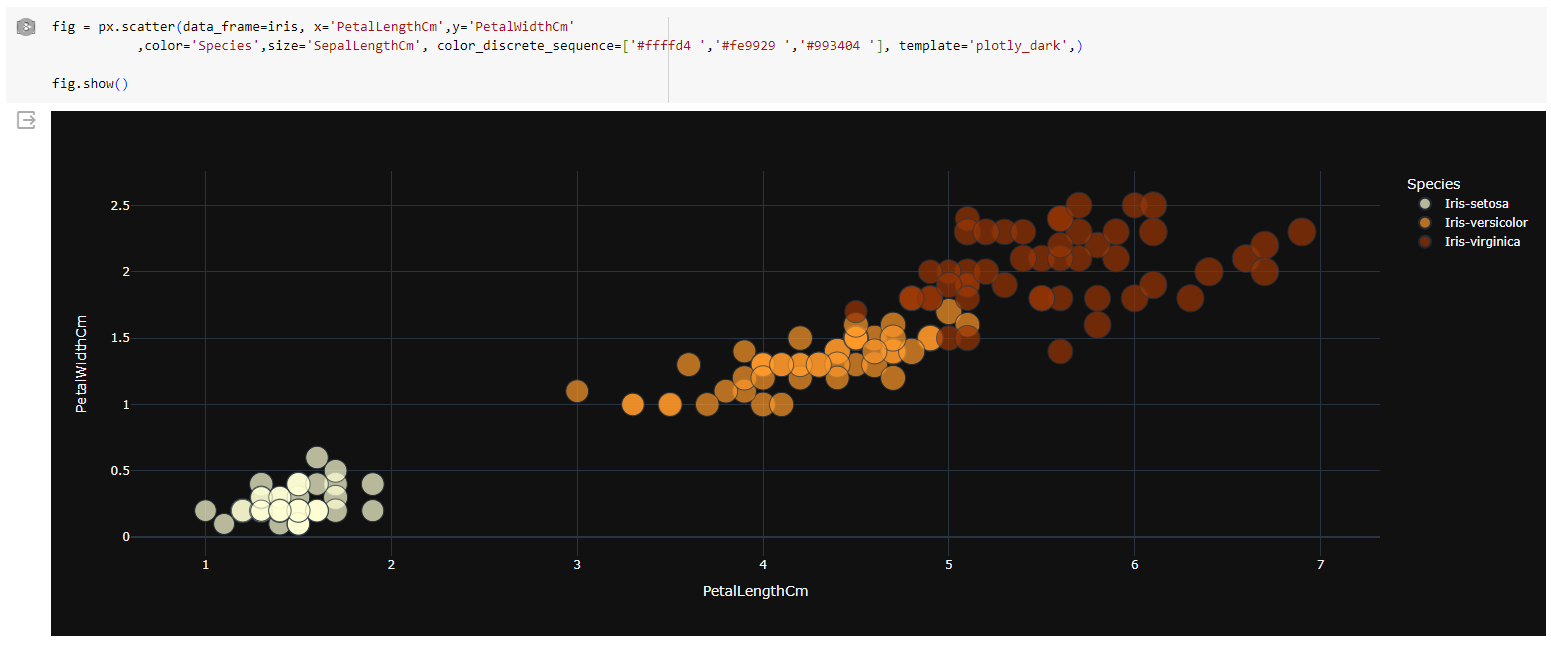
**Build KNN Classification model for given dataset.**

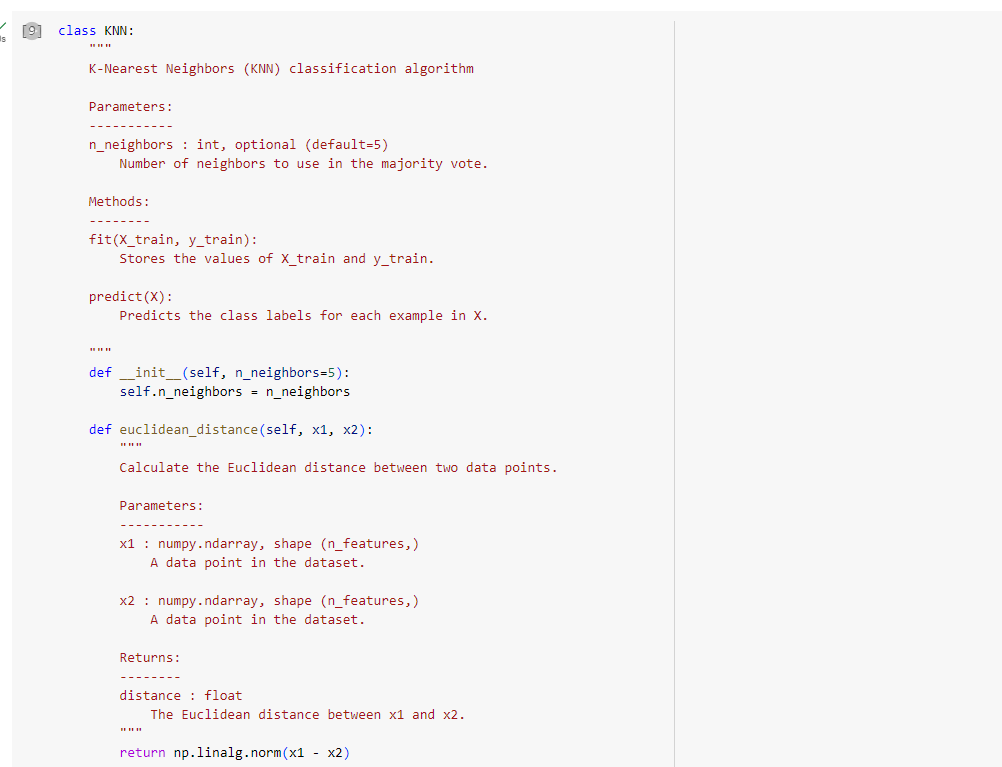
**Code:**

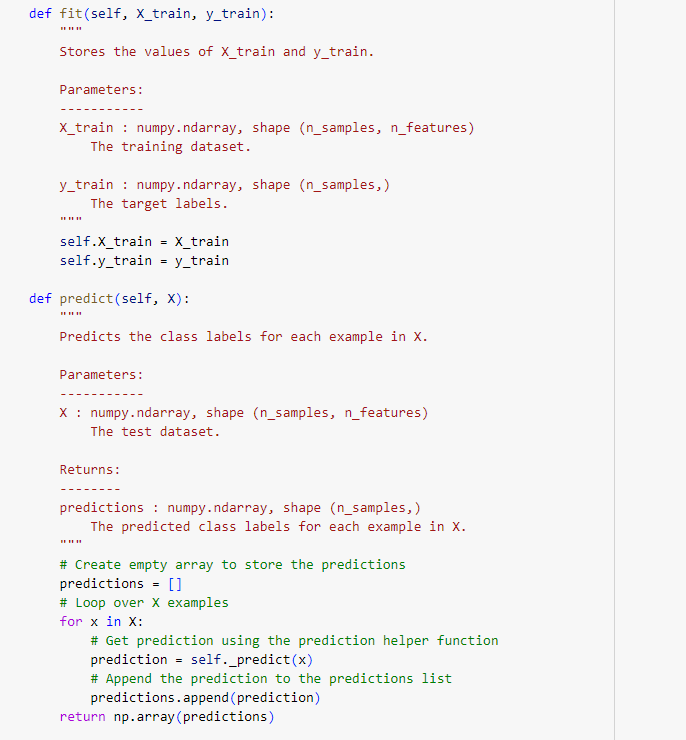


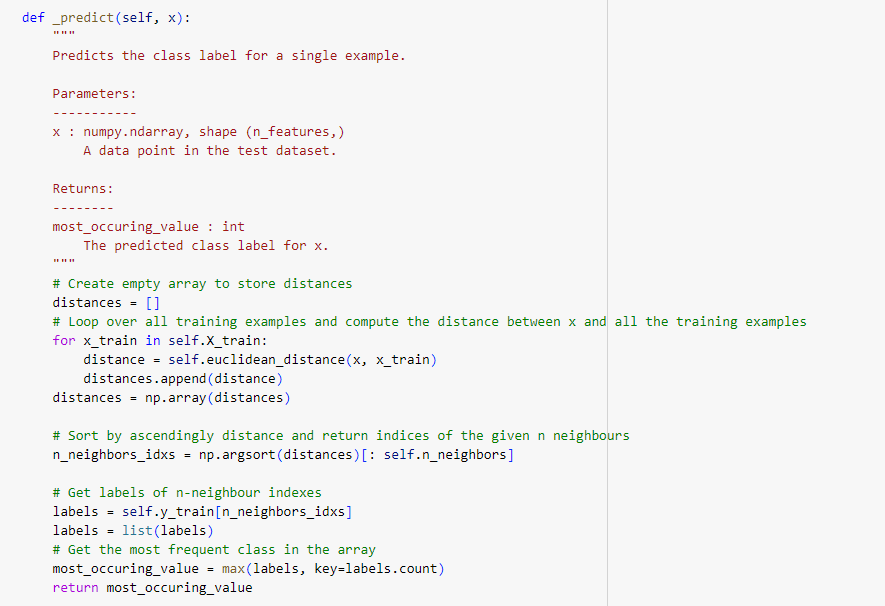


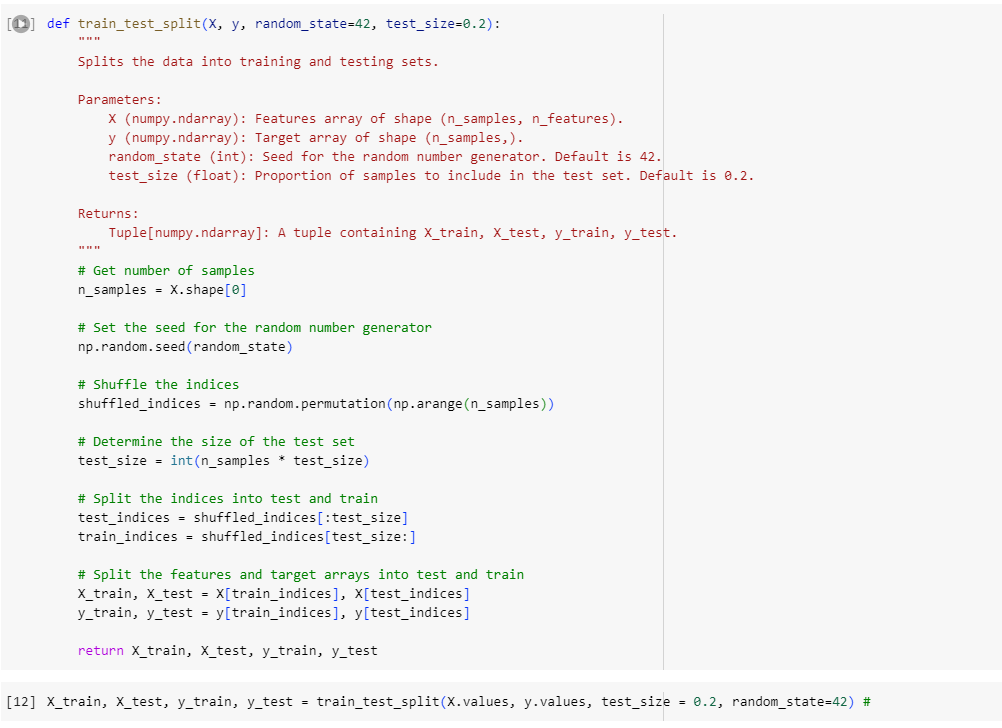


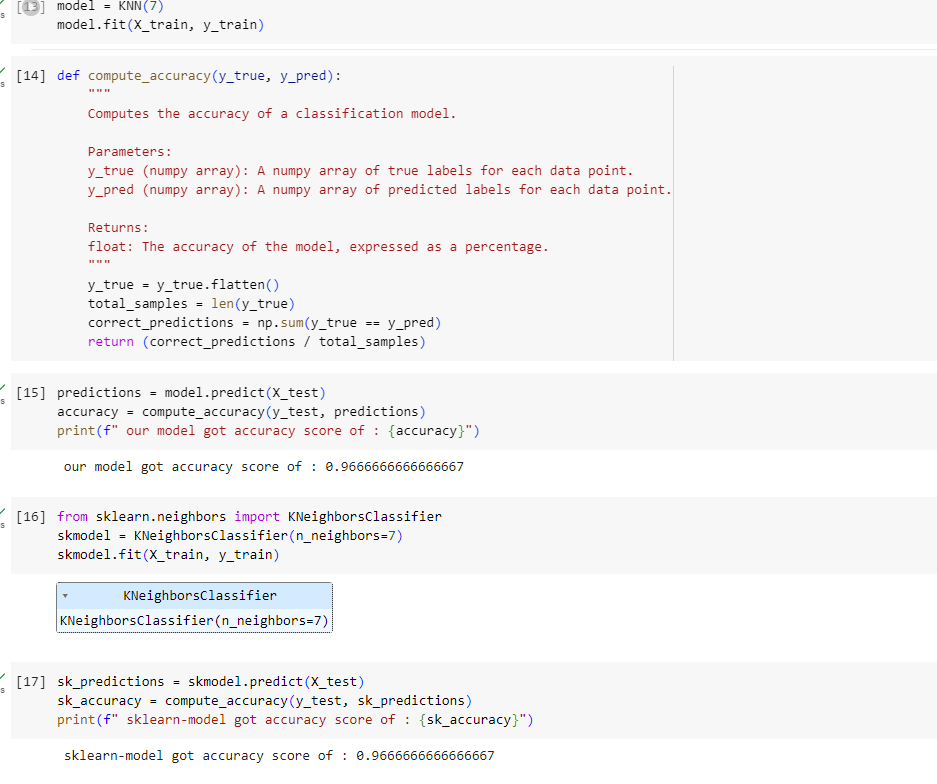




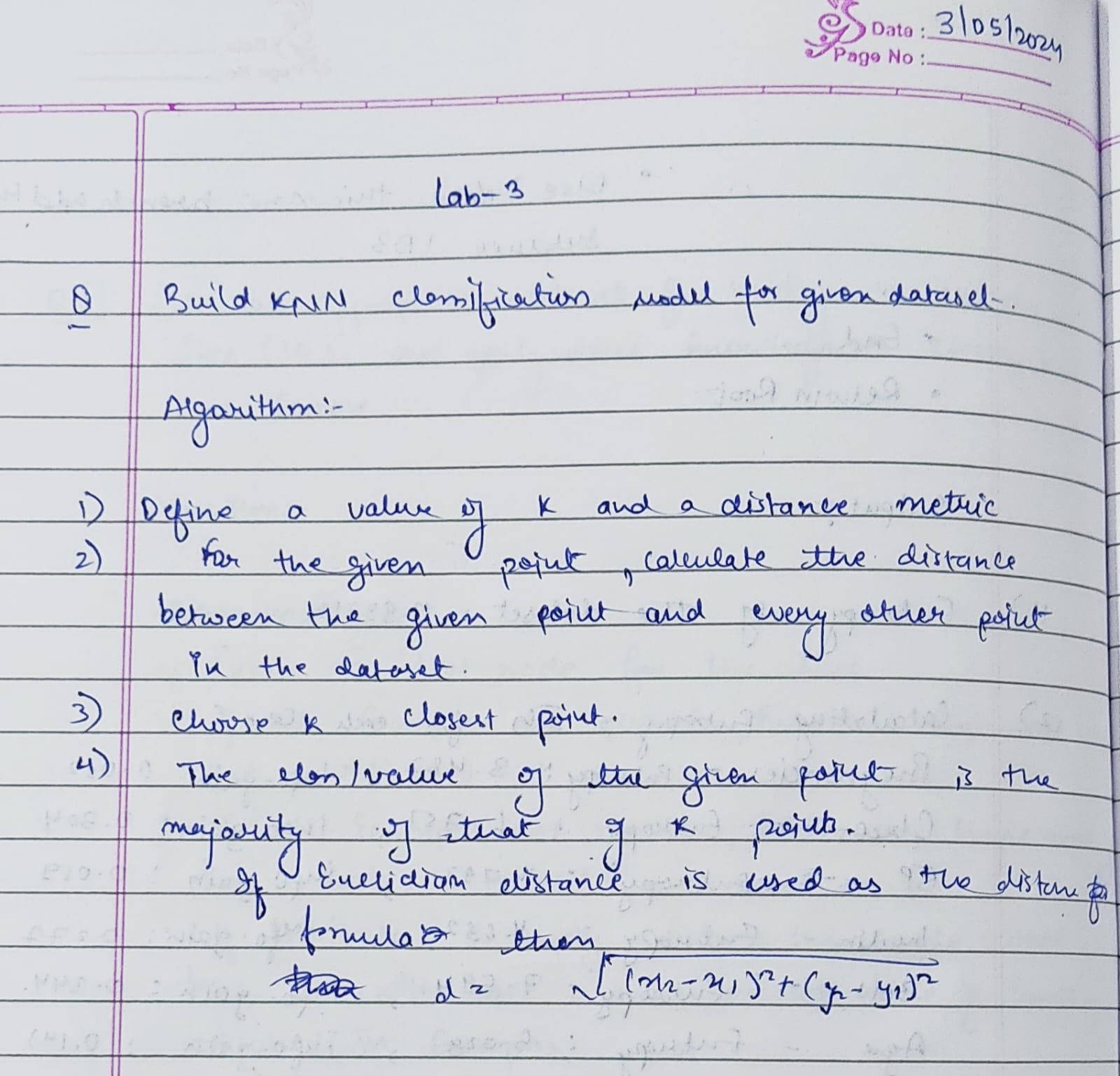






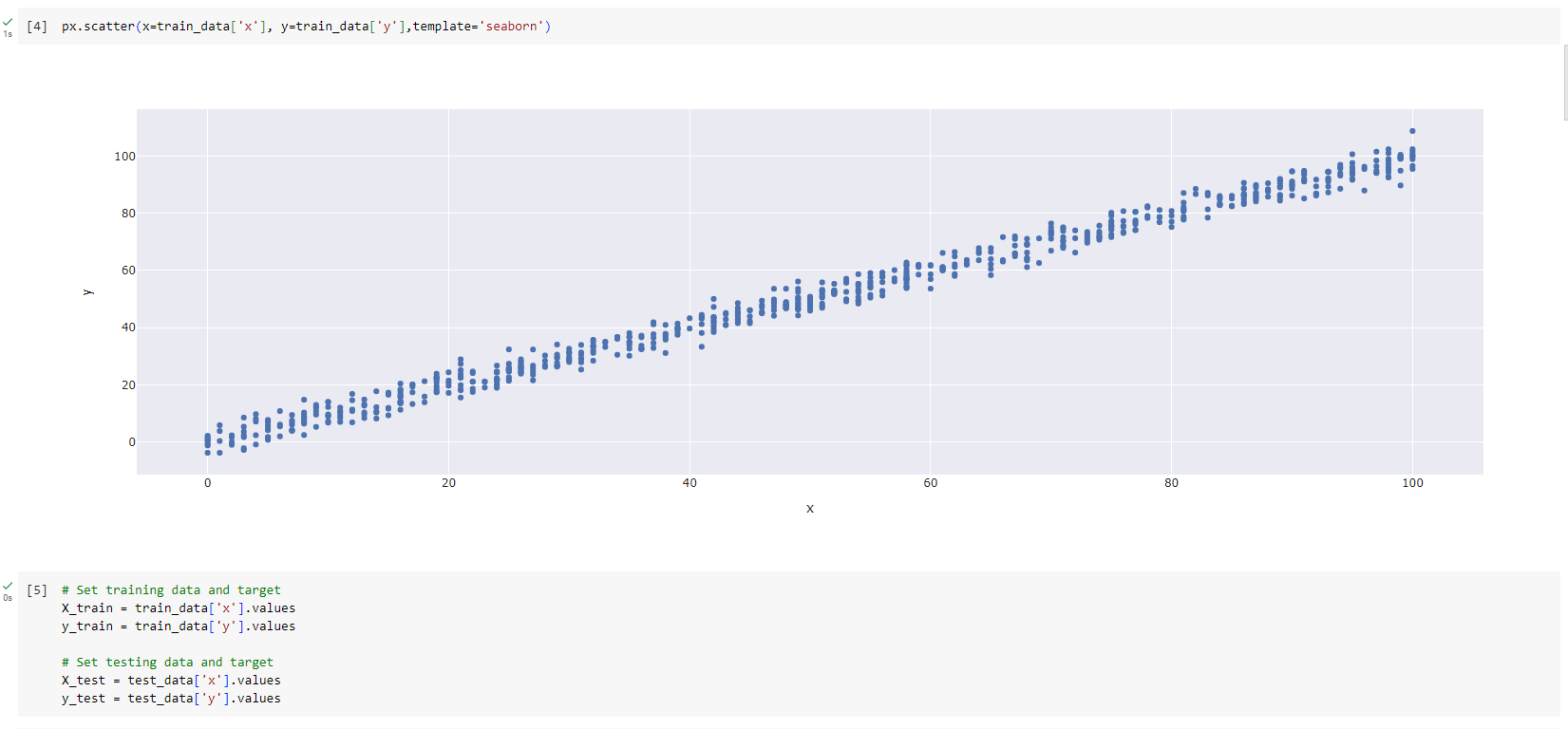


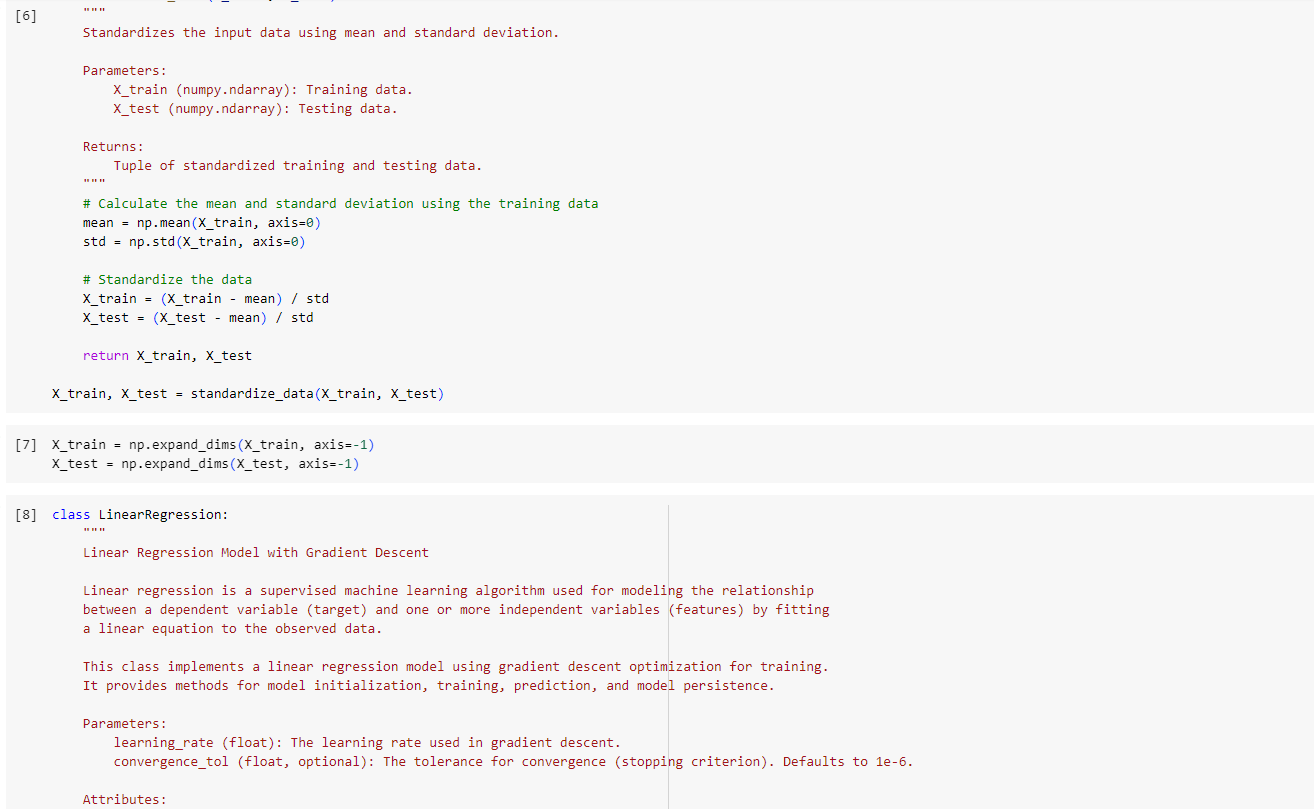
**Snapshot:**

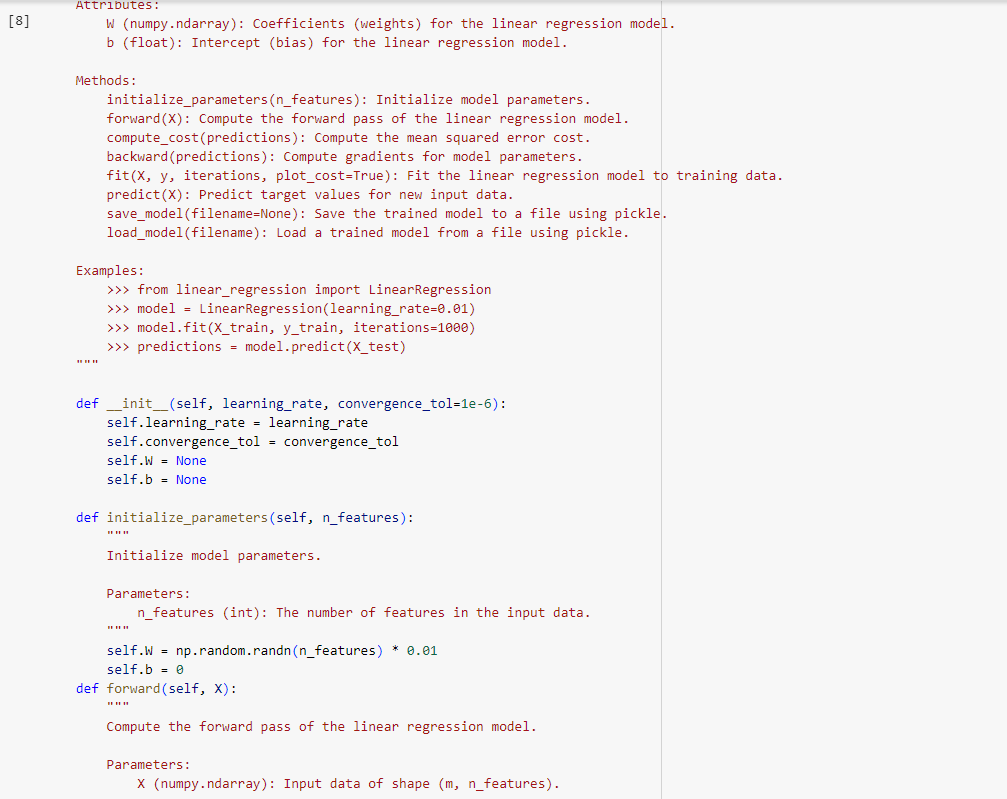


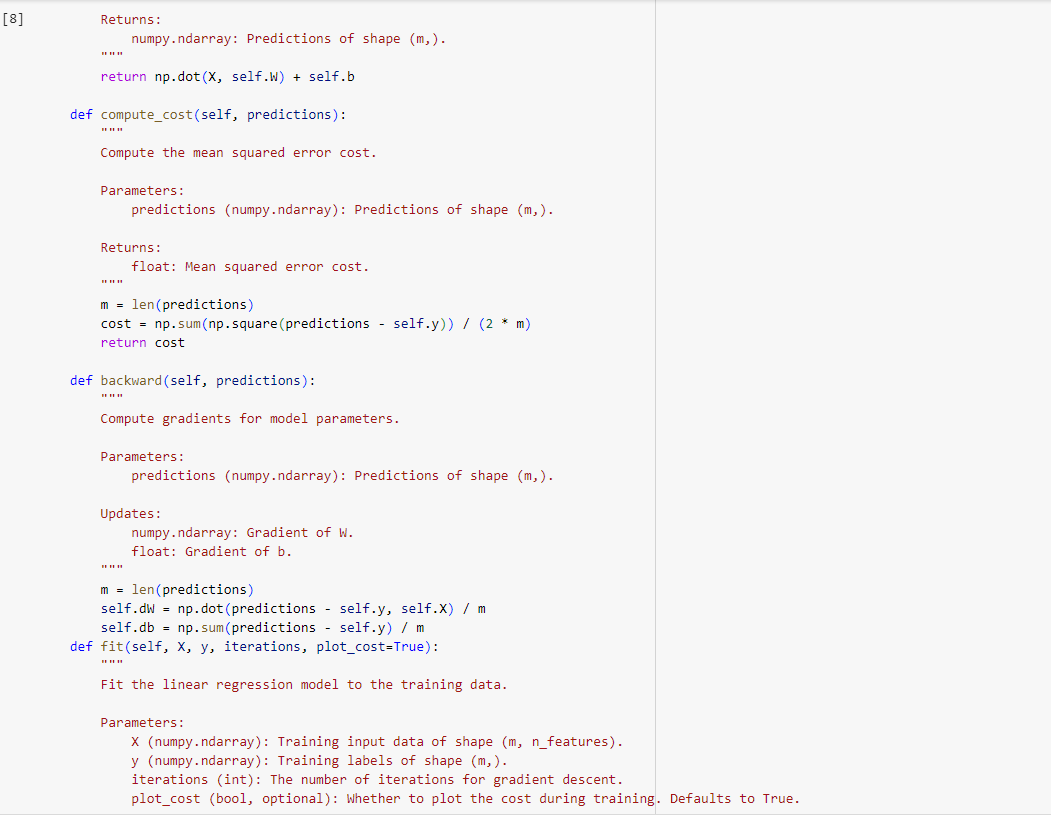
**Build linear regression model for the dataset:**

**Code:**

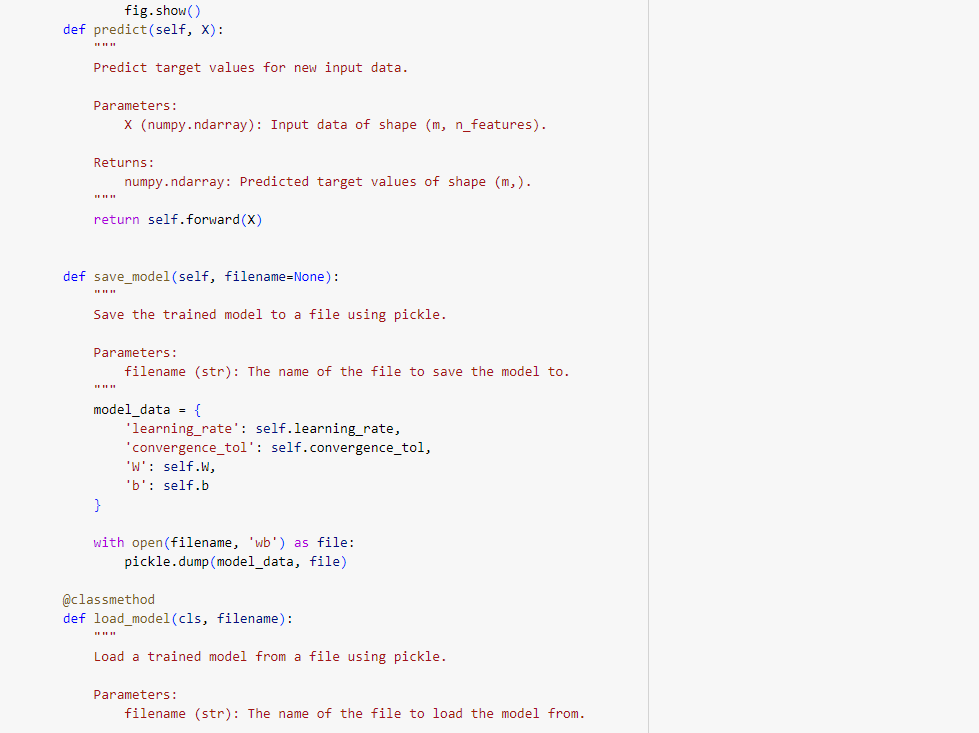


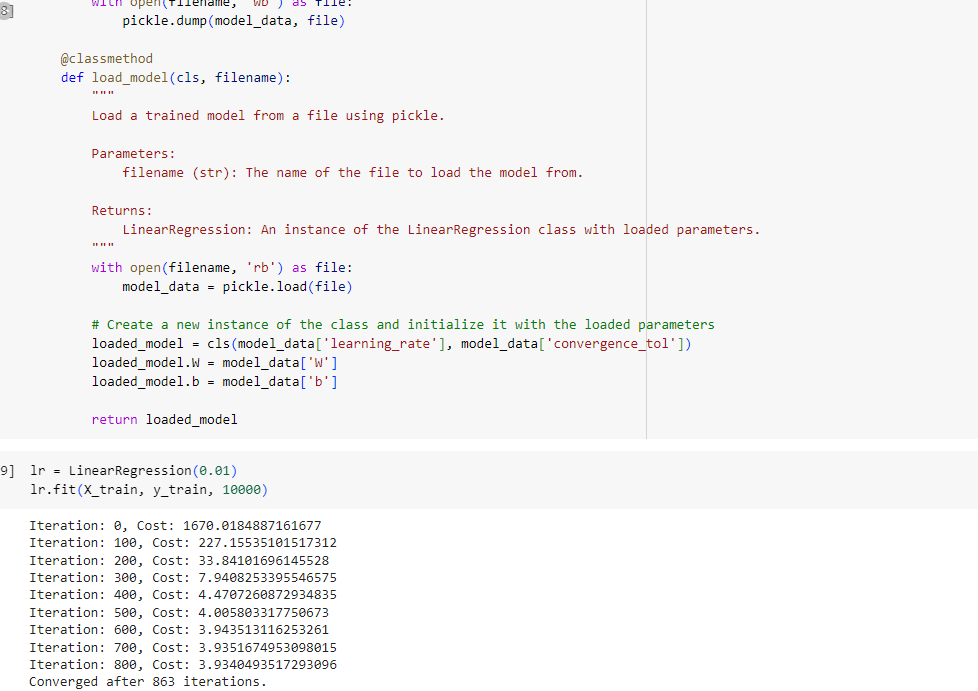


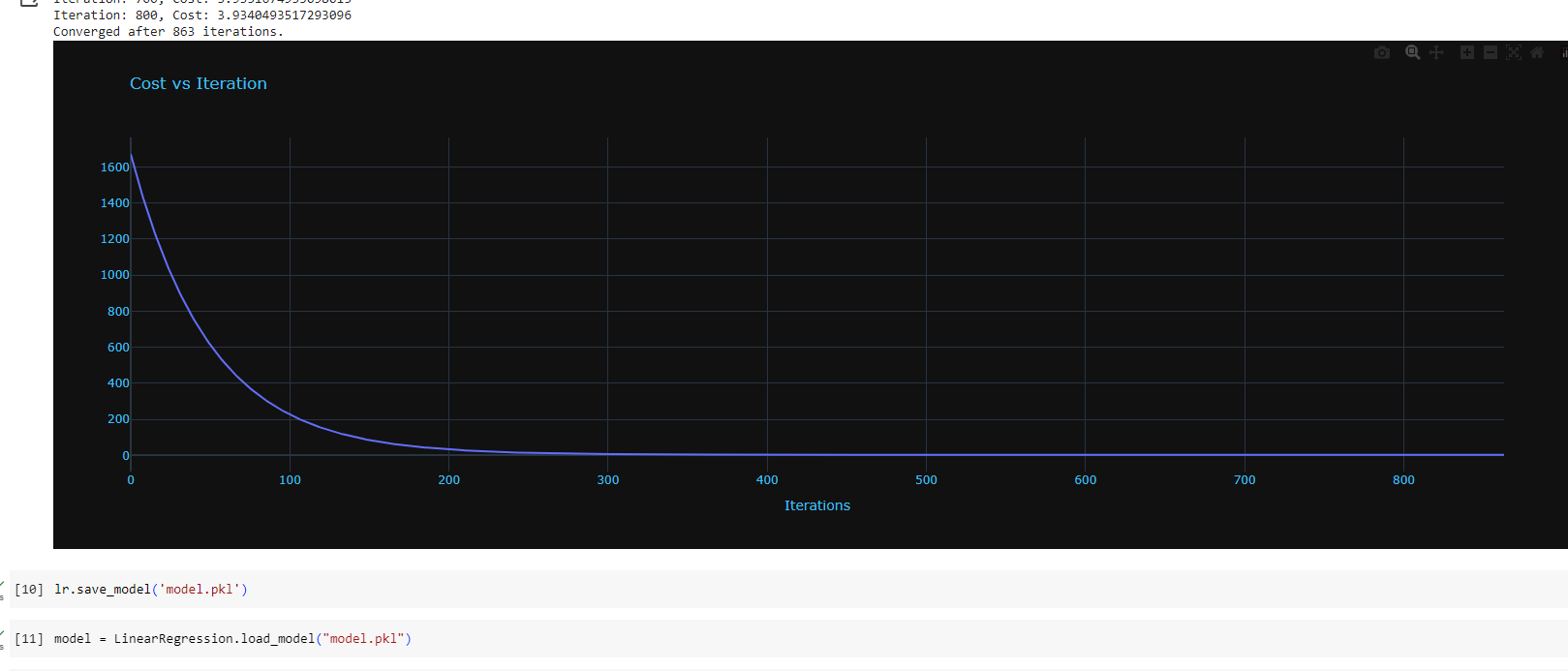






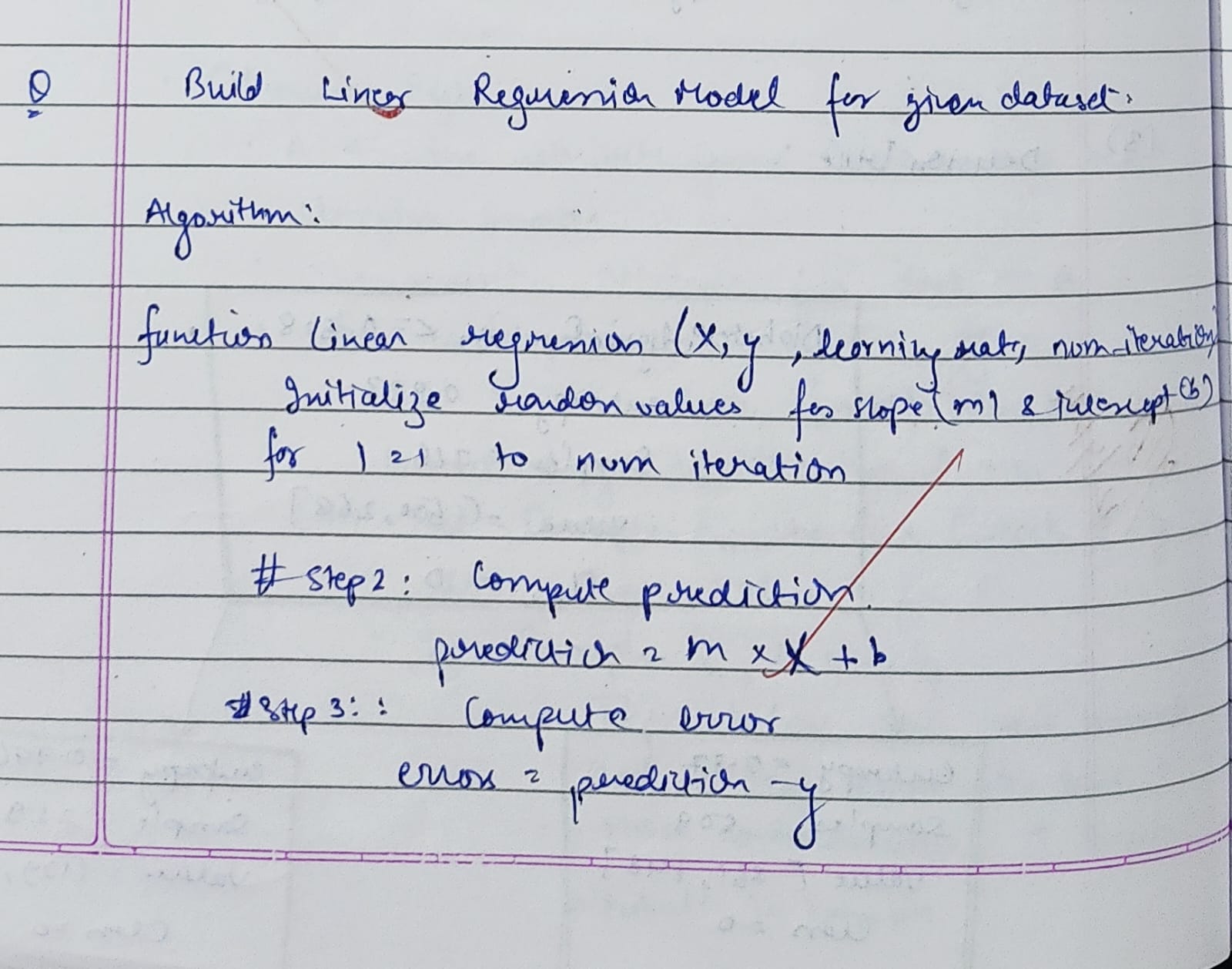


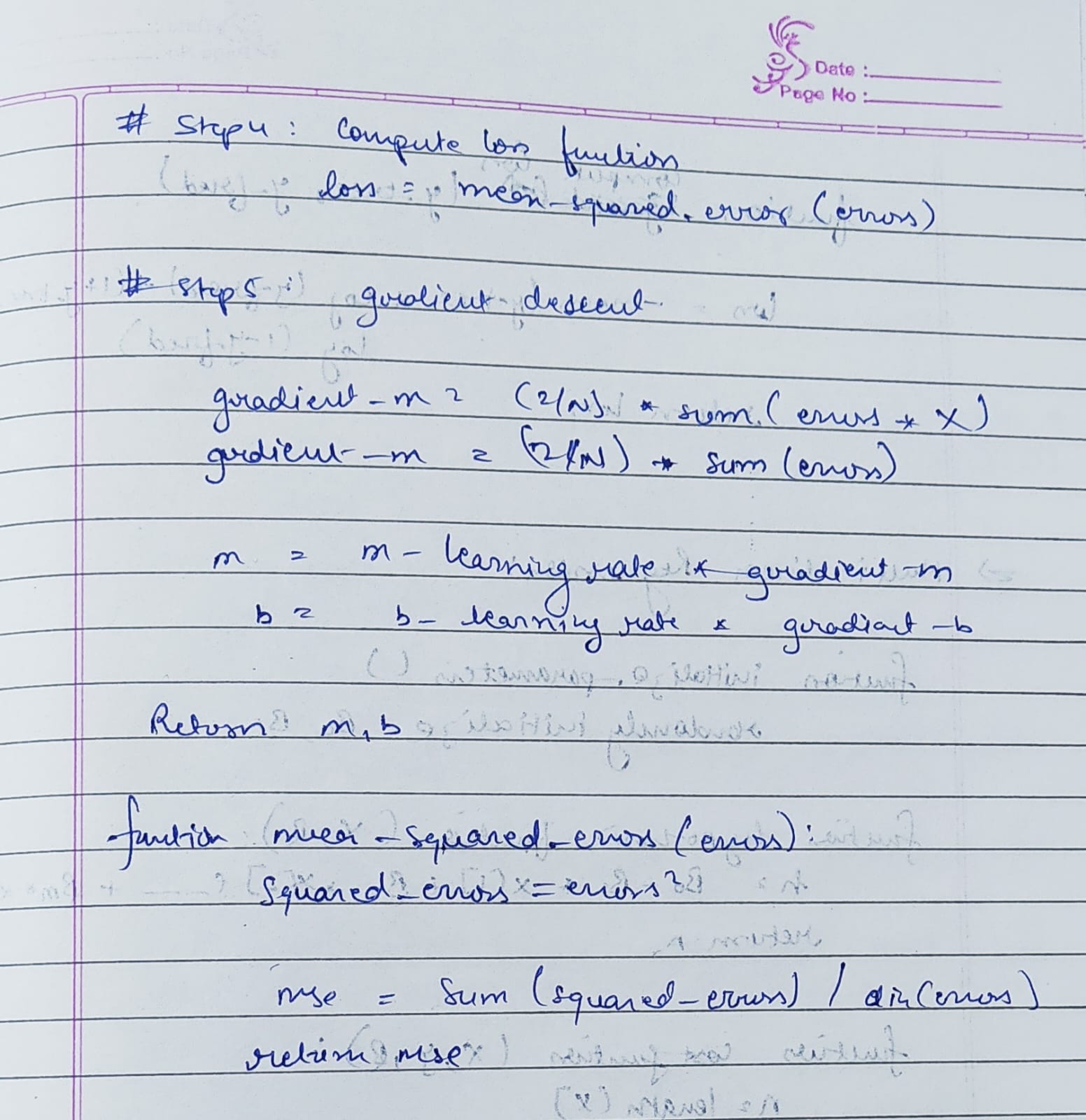






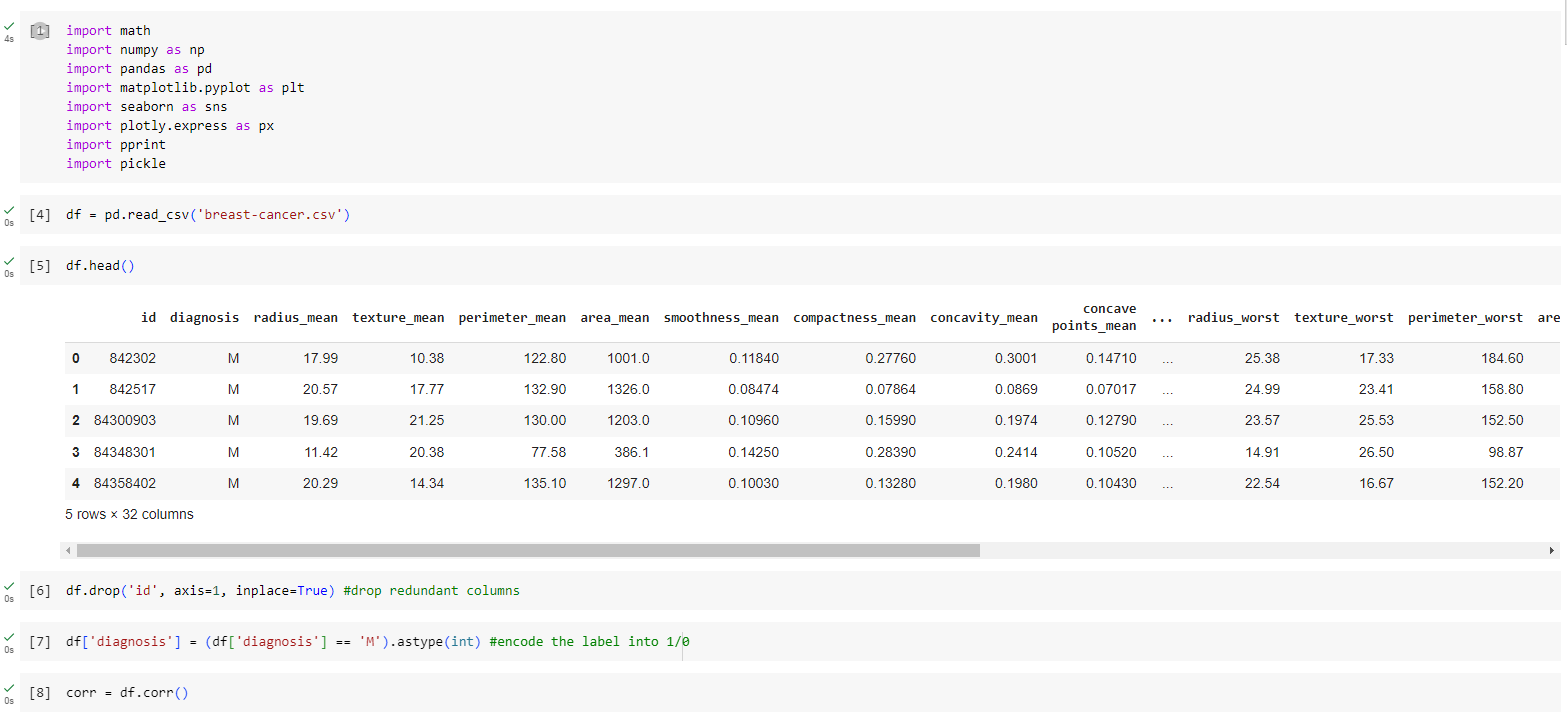


**Snapshot:**



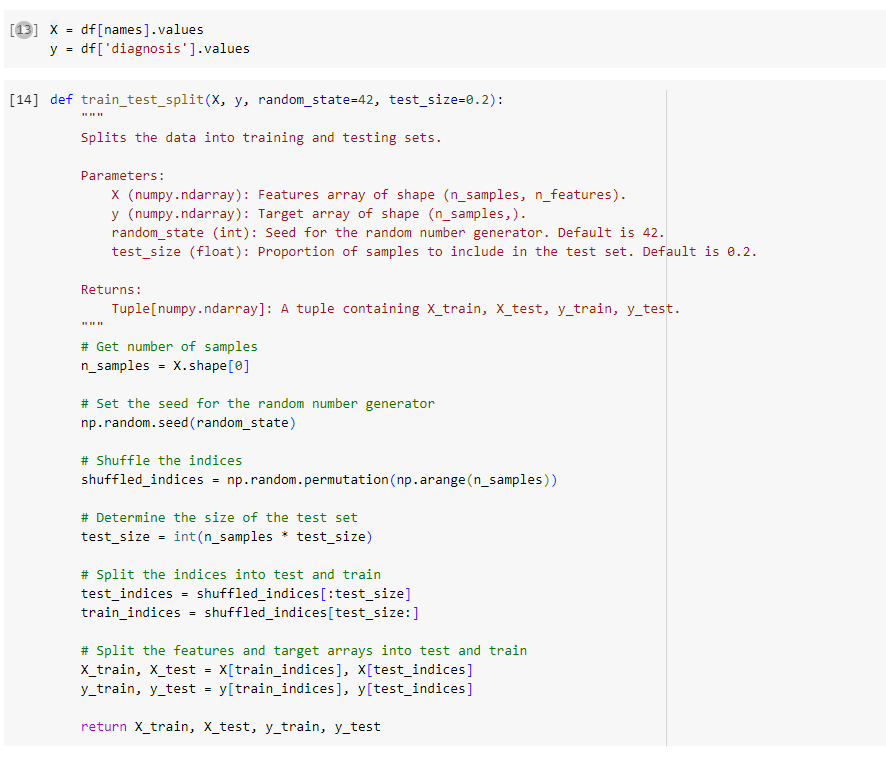
**Implement logistic regression using appropriate dataset:**

**Code:**

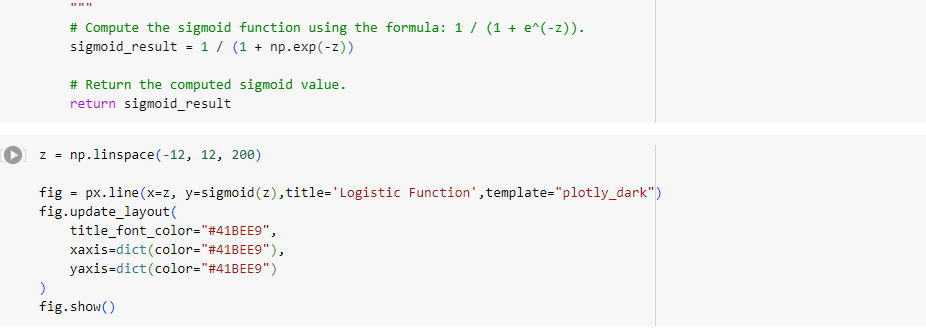


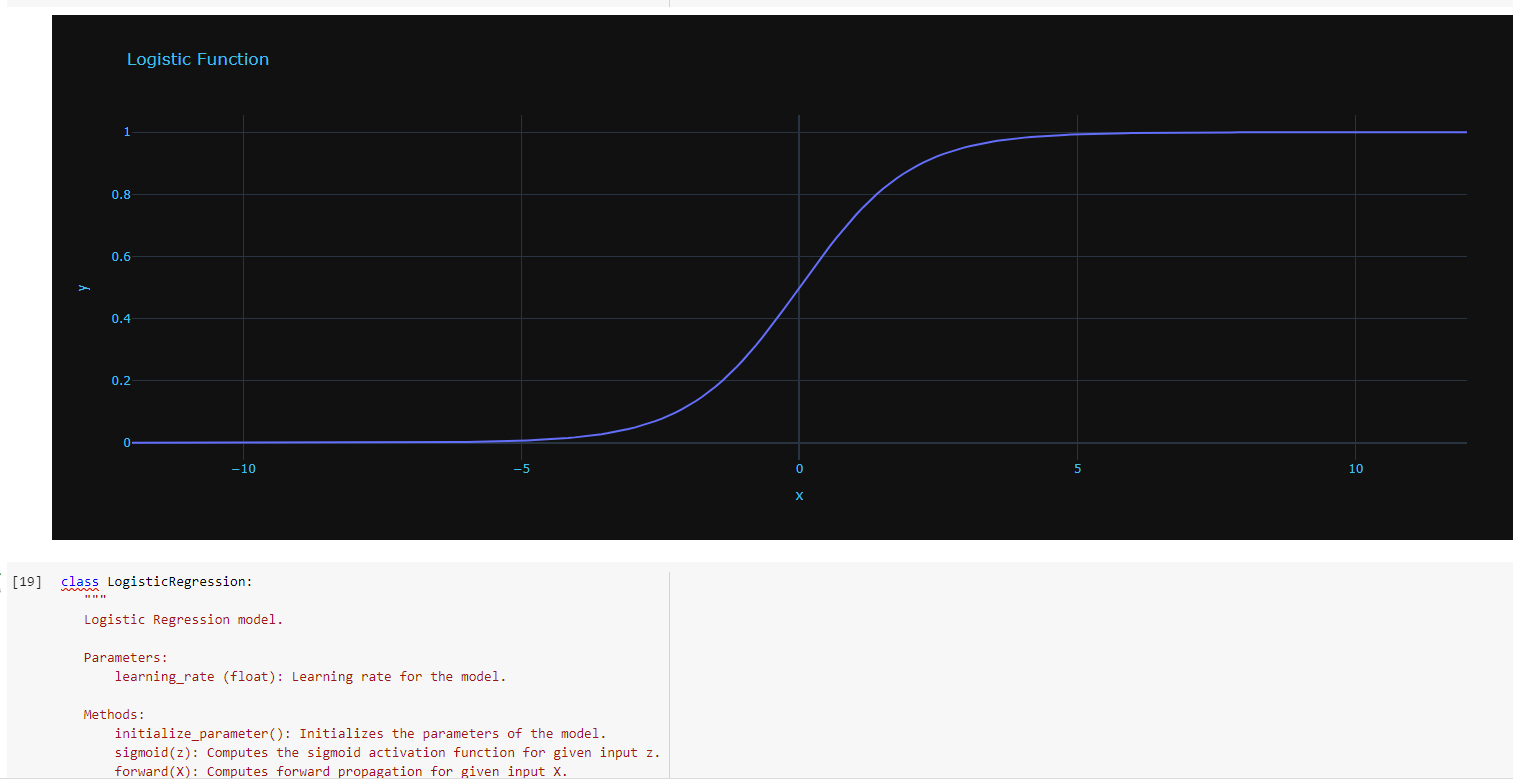


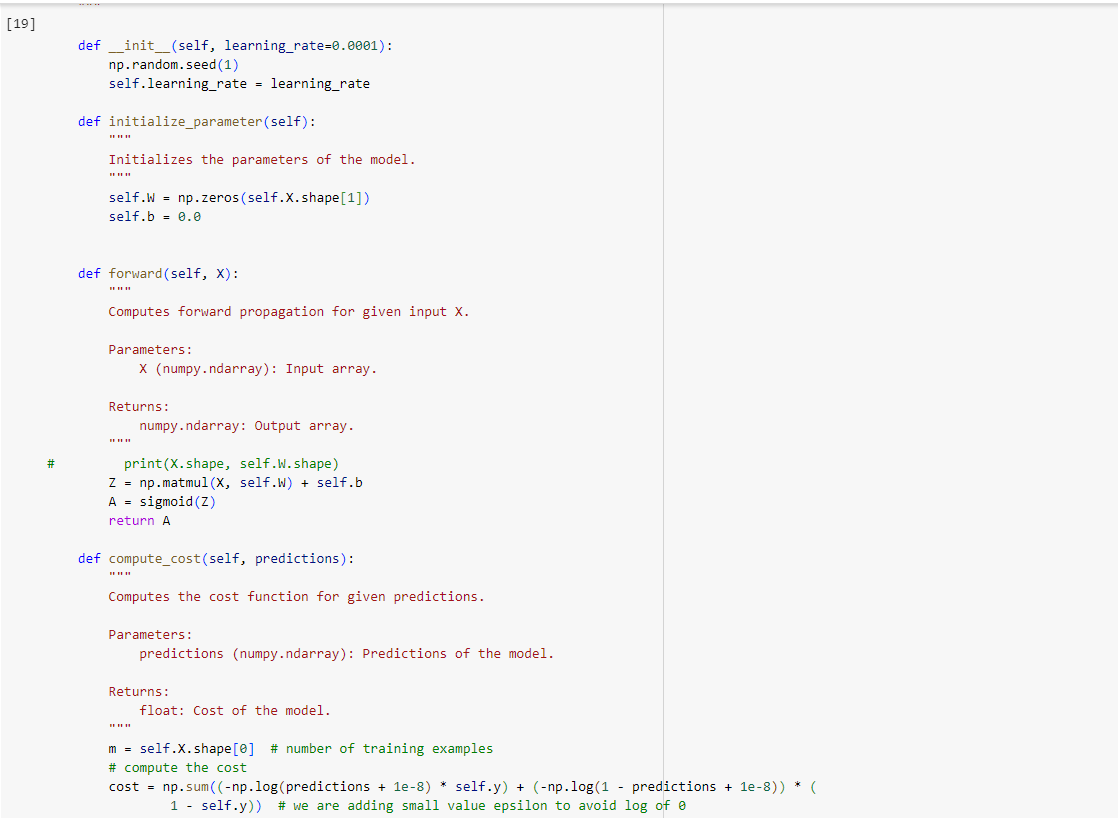


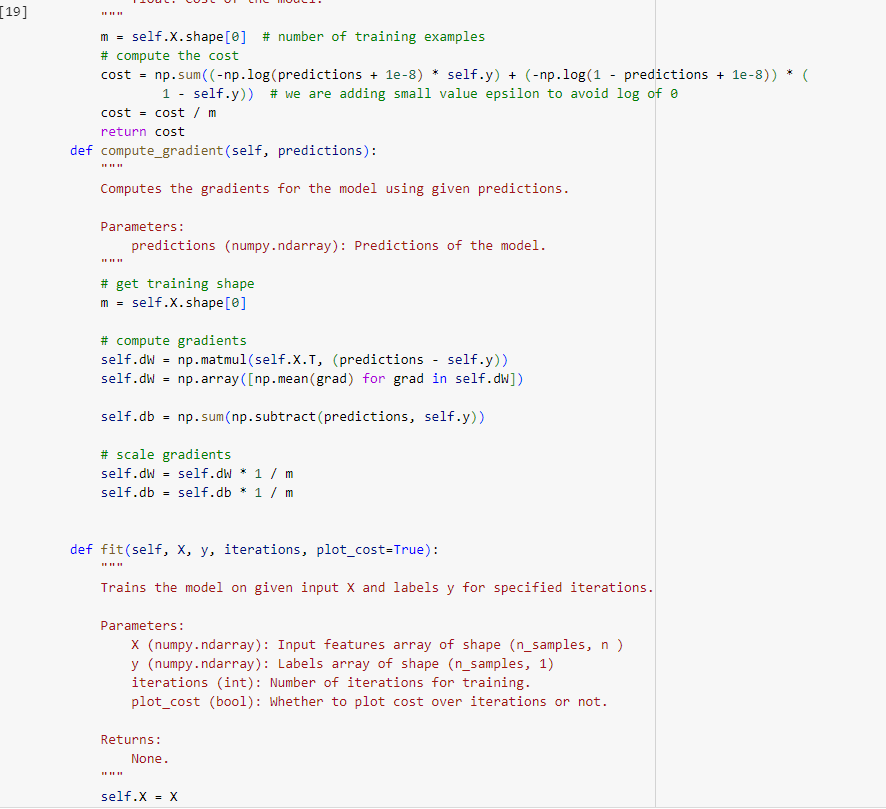


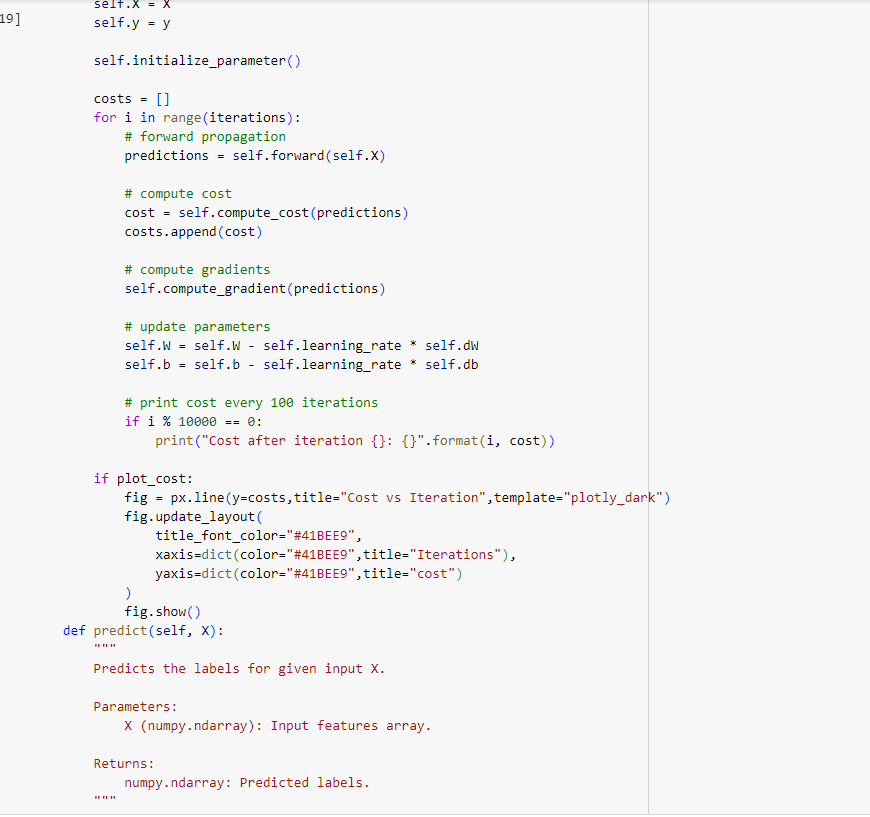


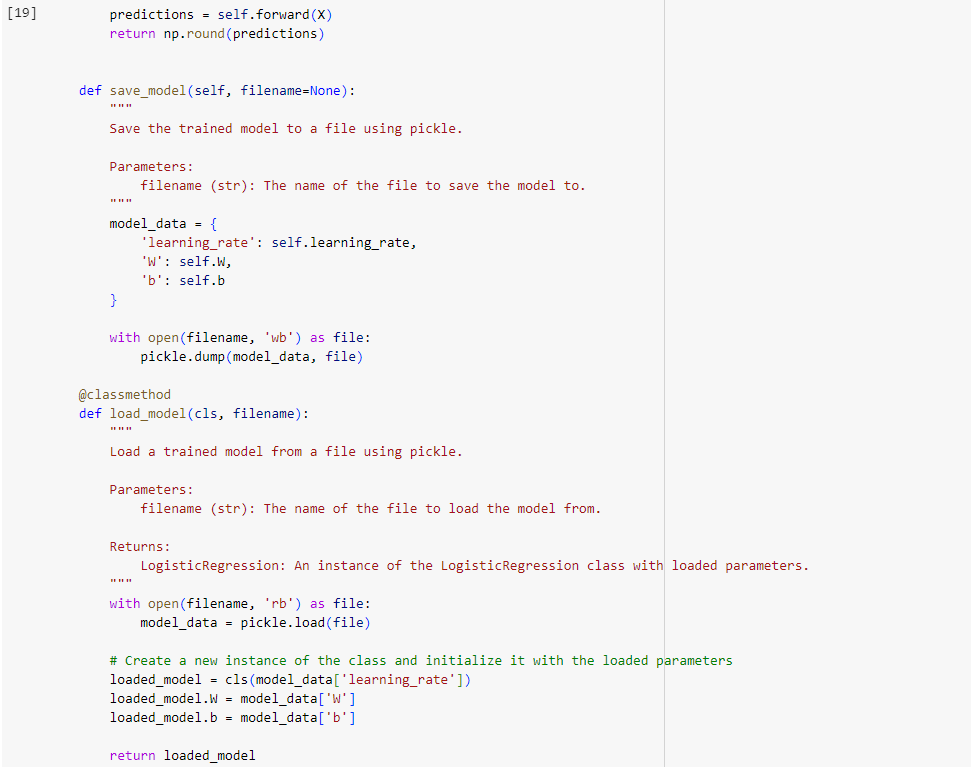






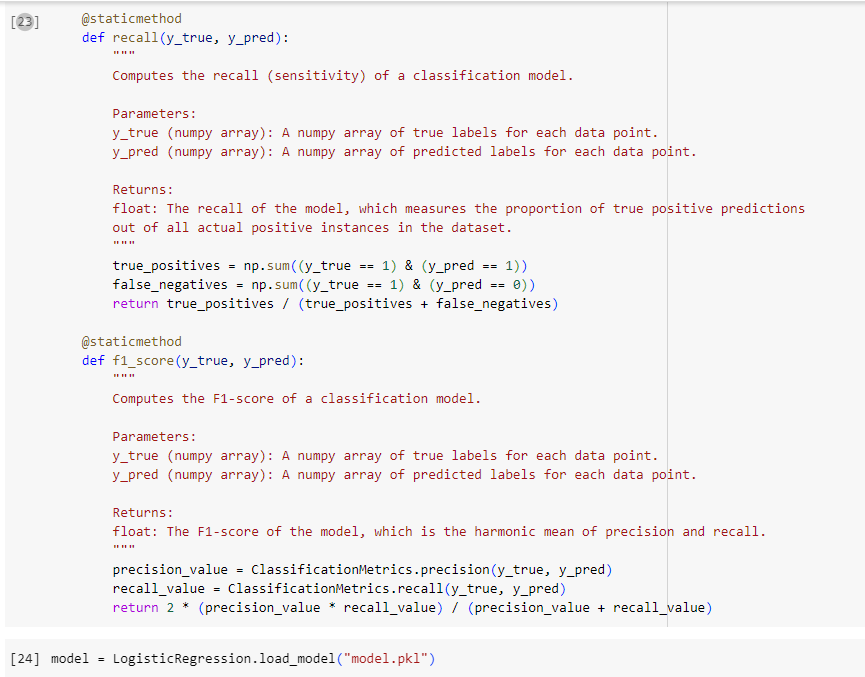


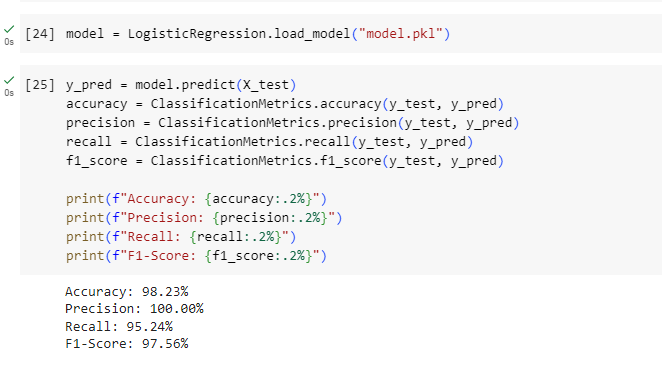




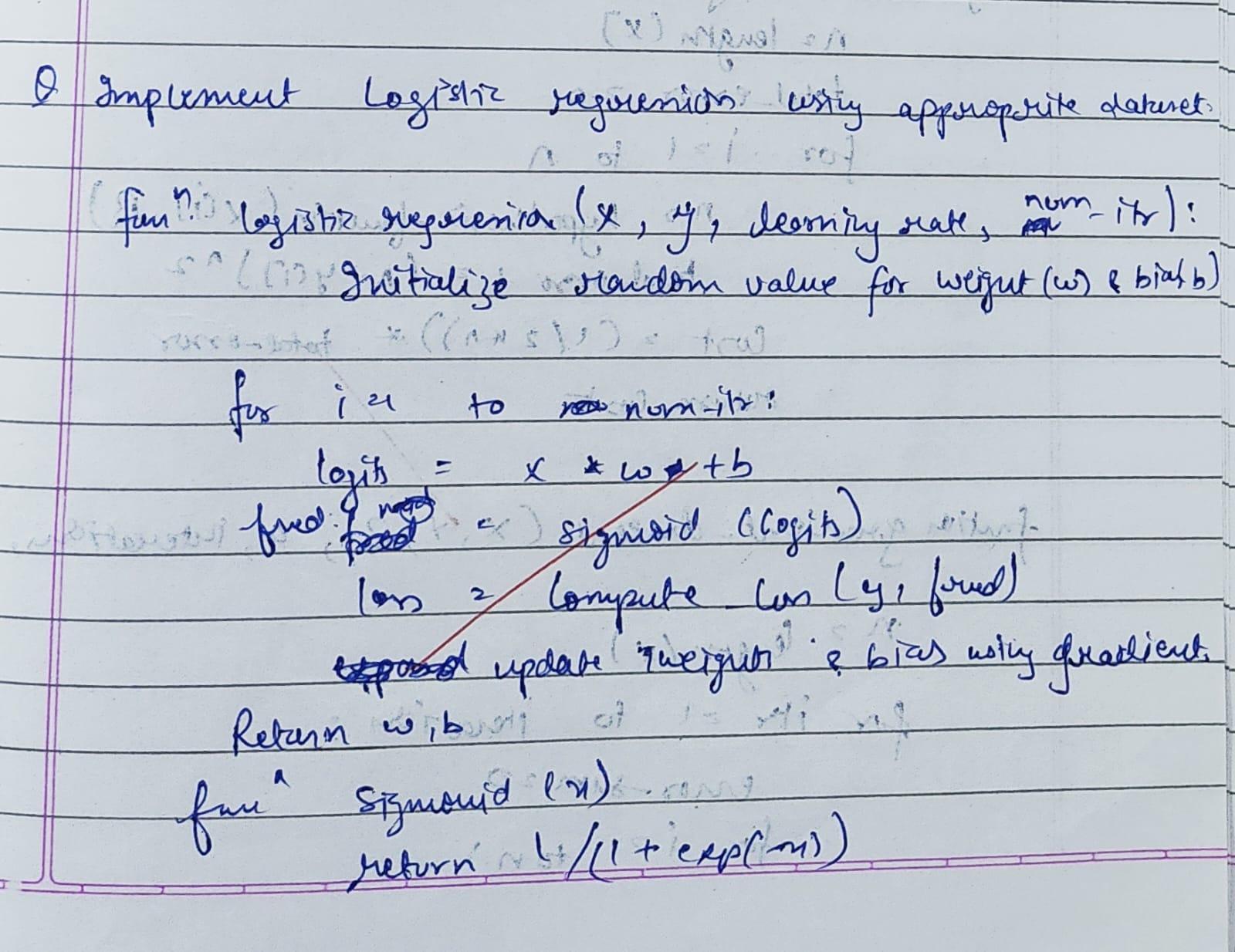


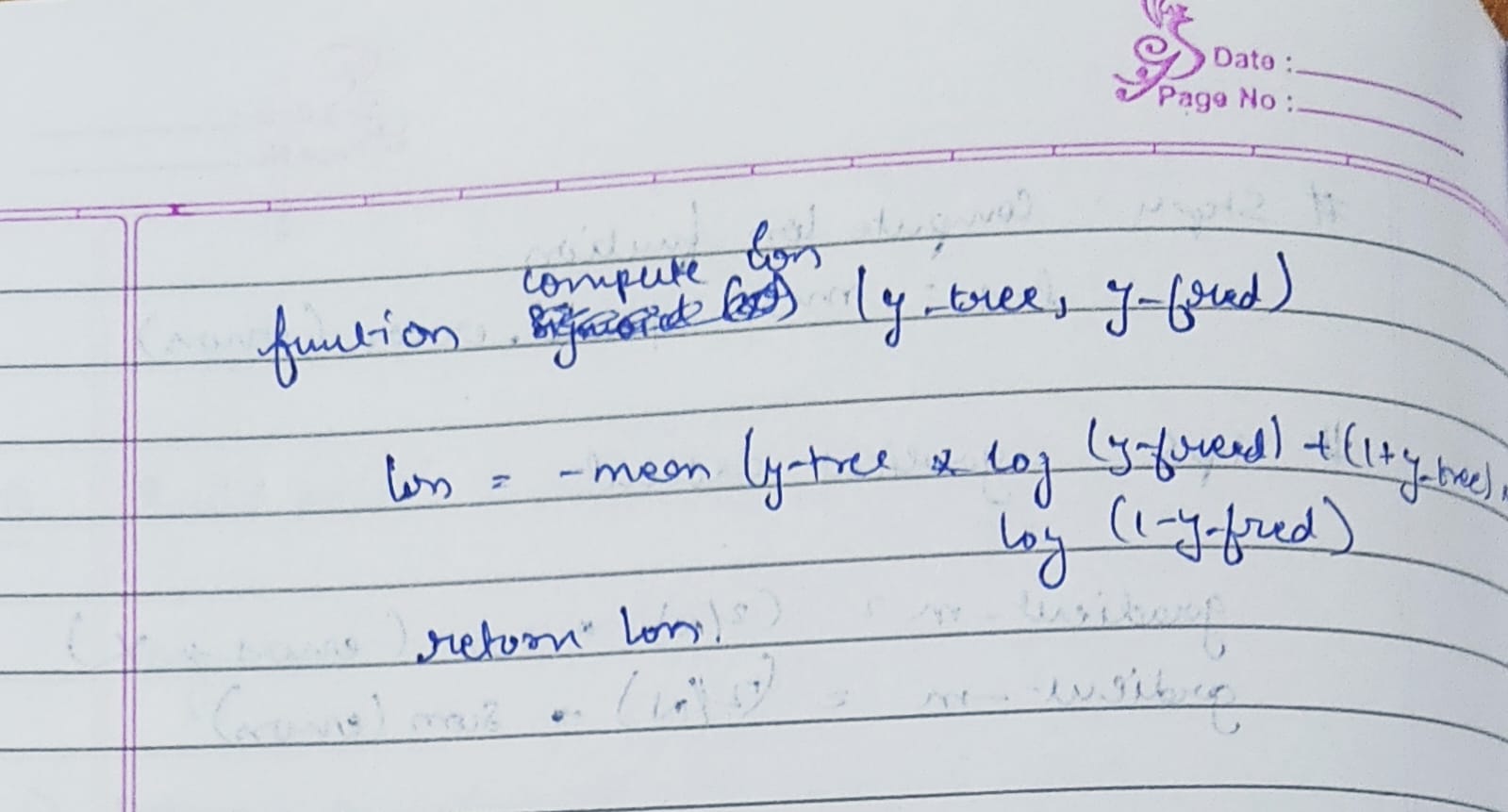






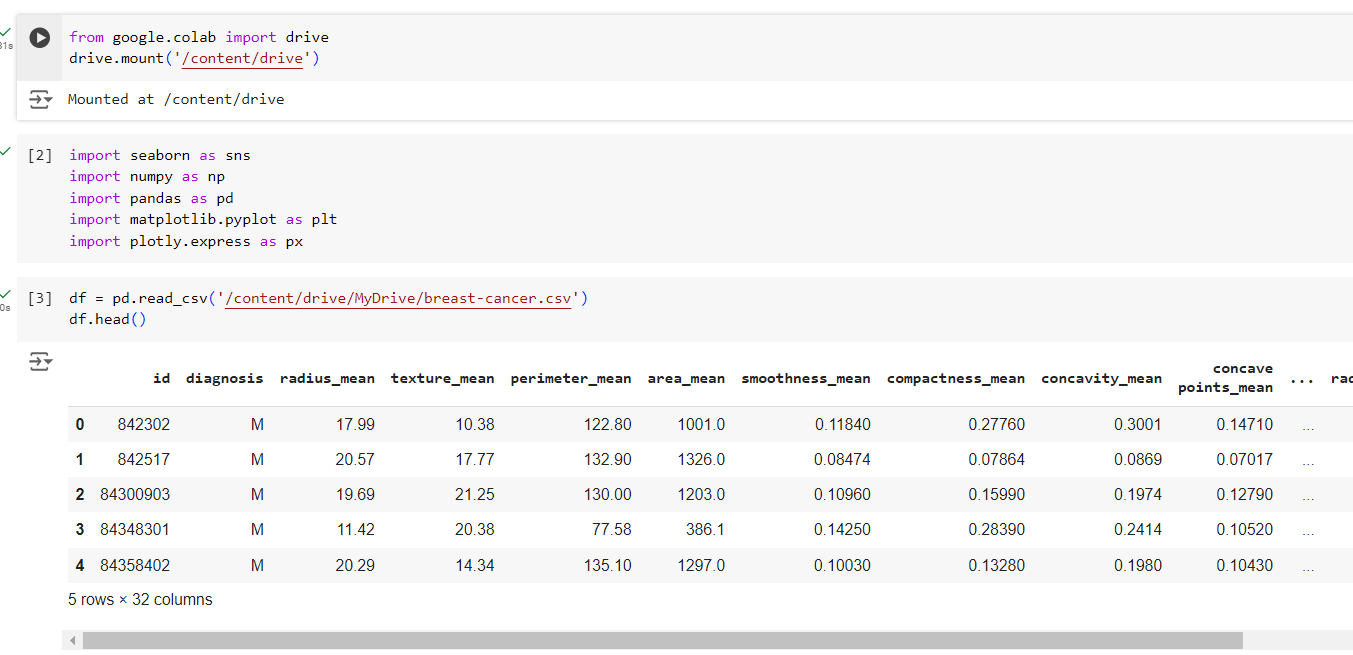
**Snapshot:**

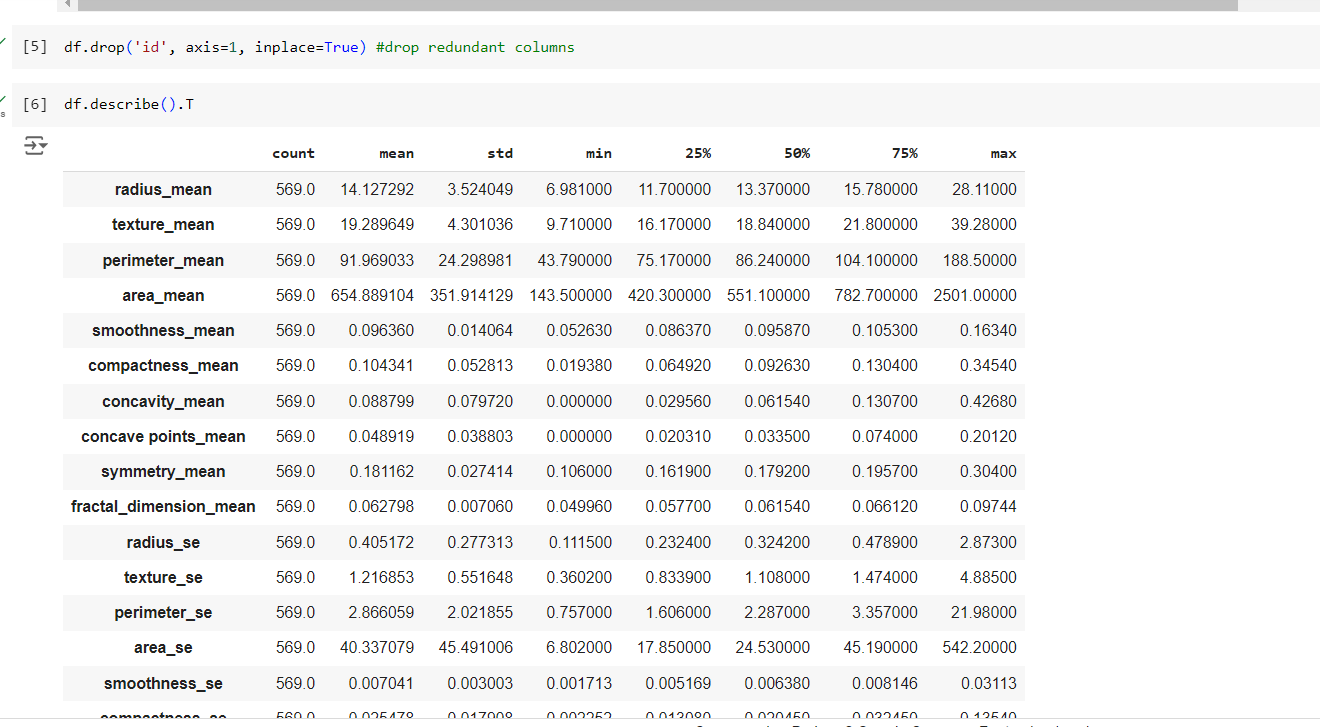


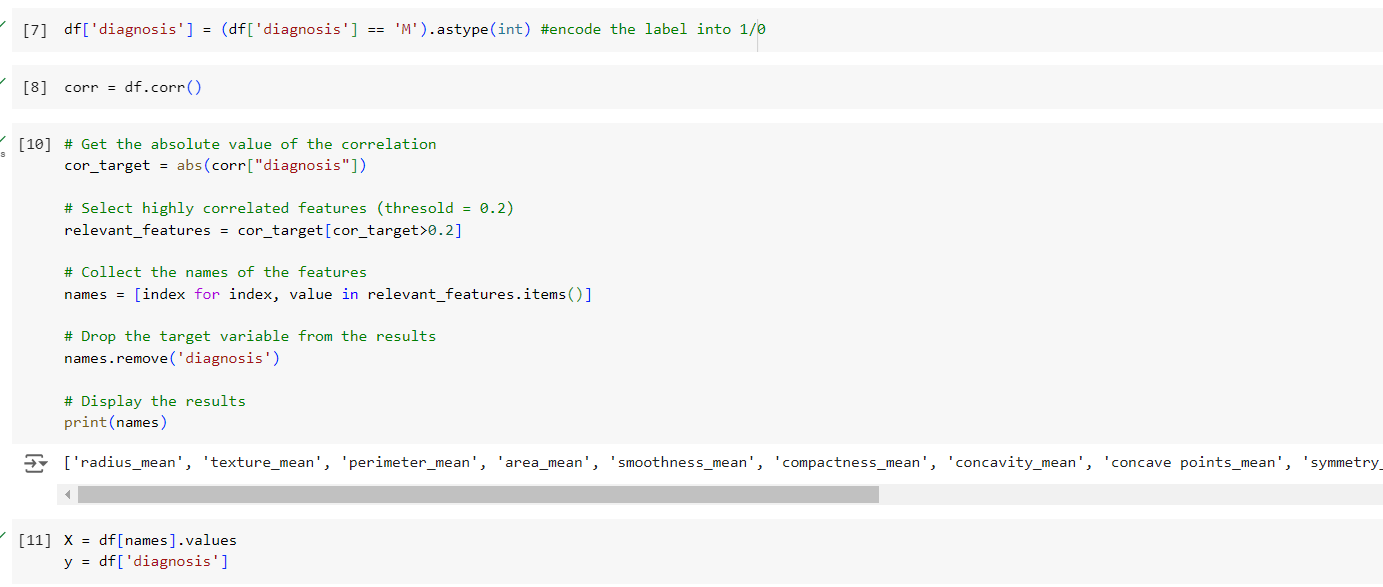


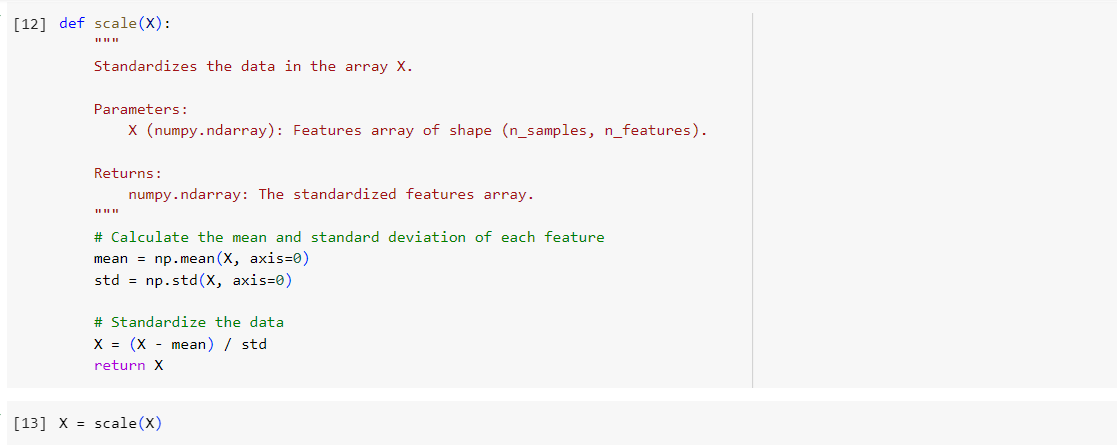
**Build support vector machine for the dataset:**

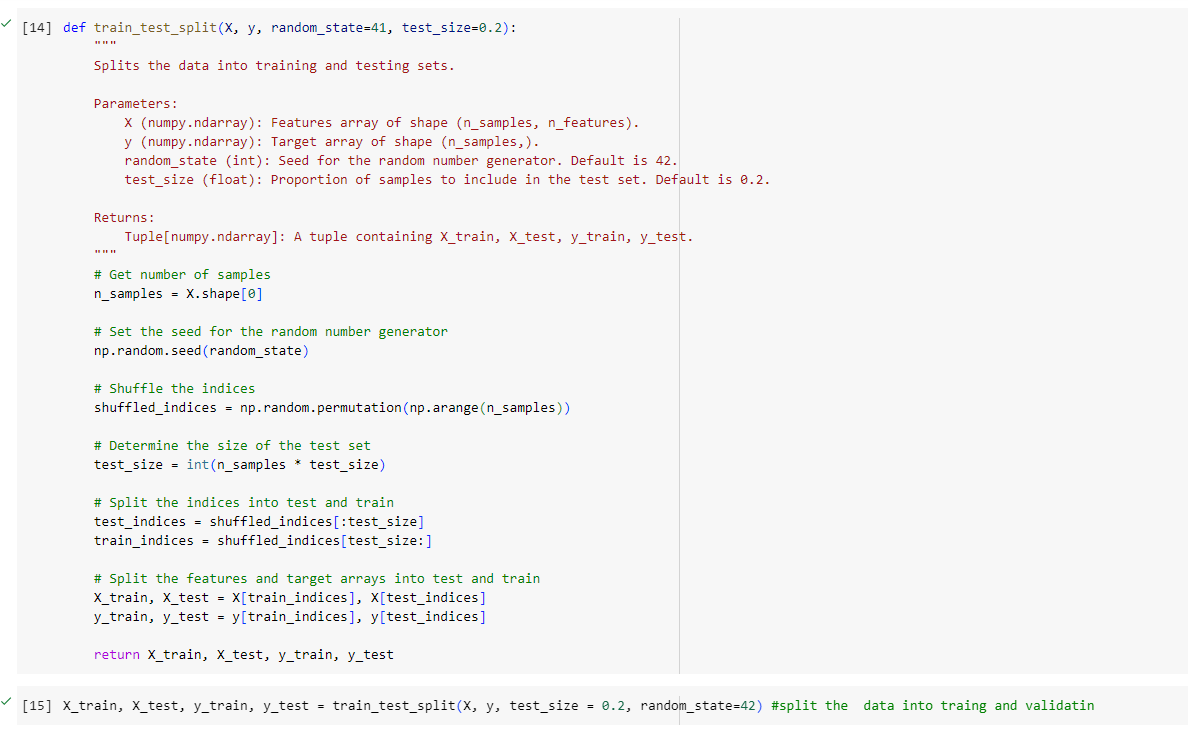
**Code:**

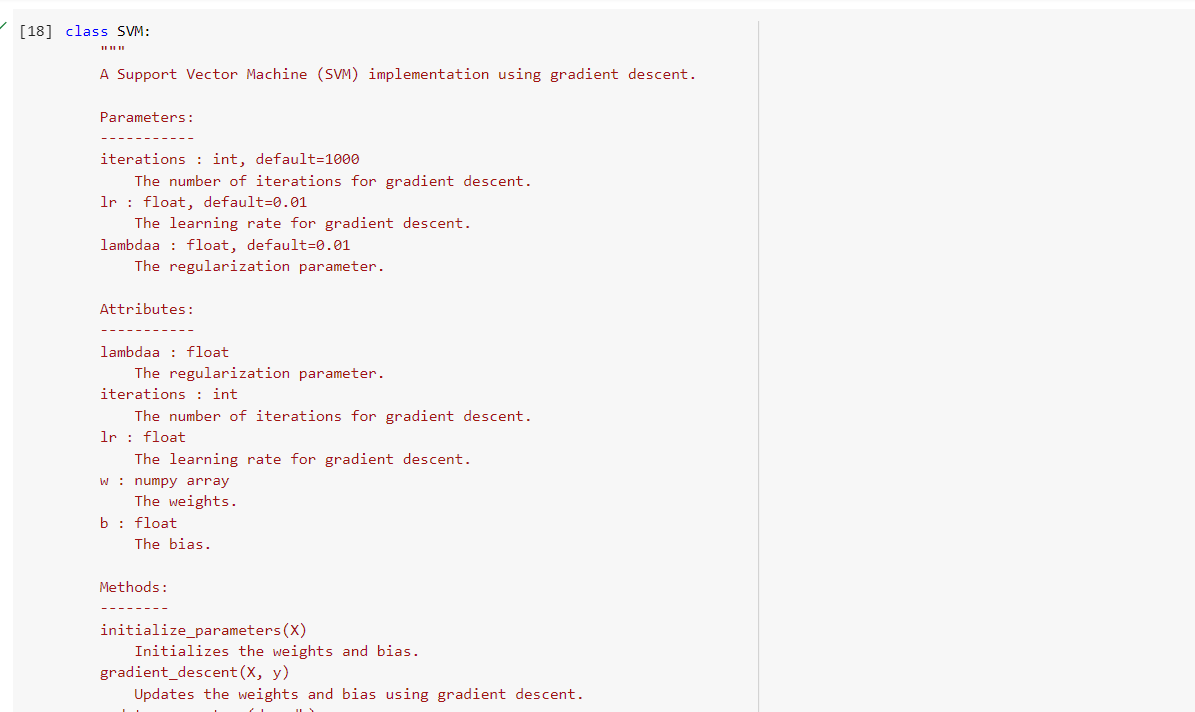




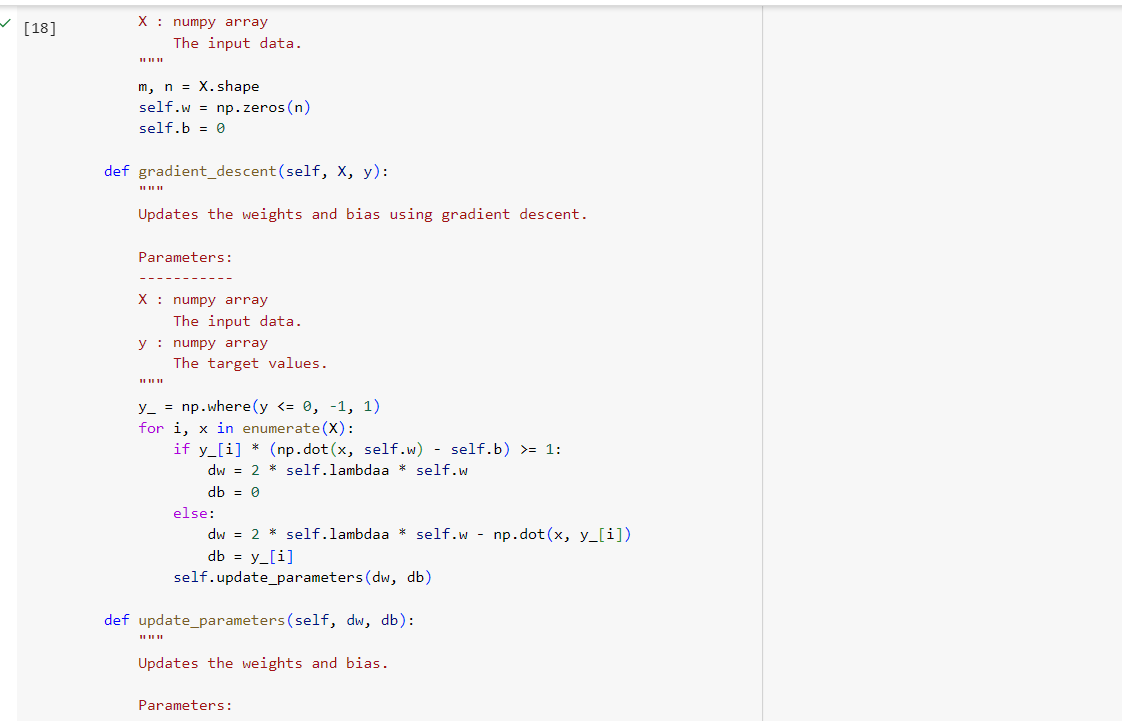


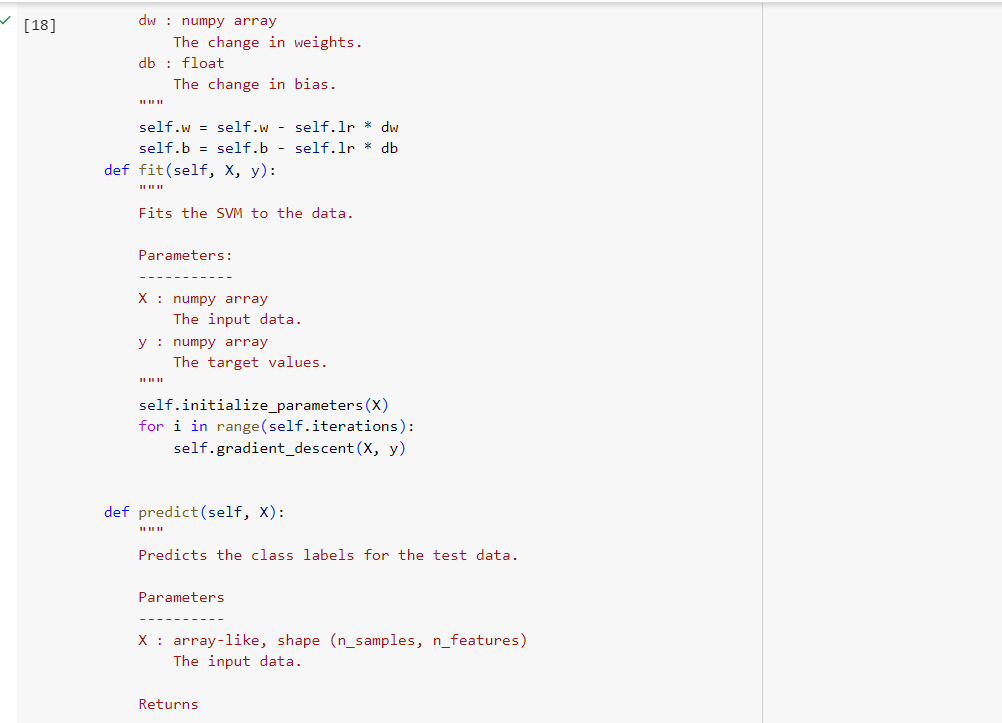


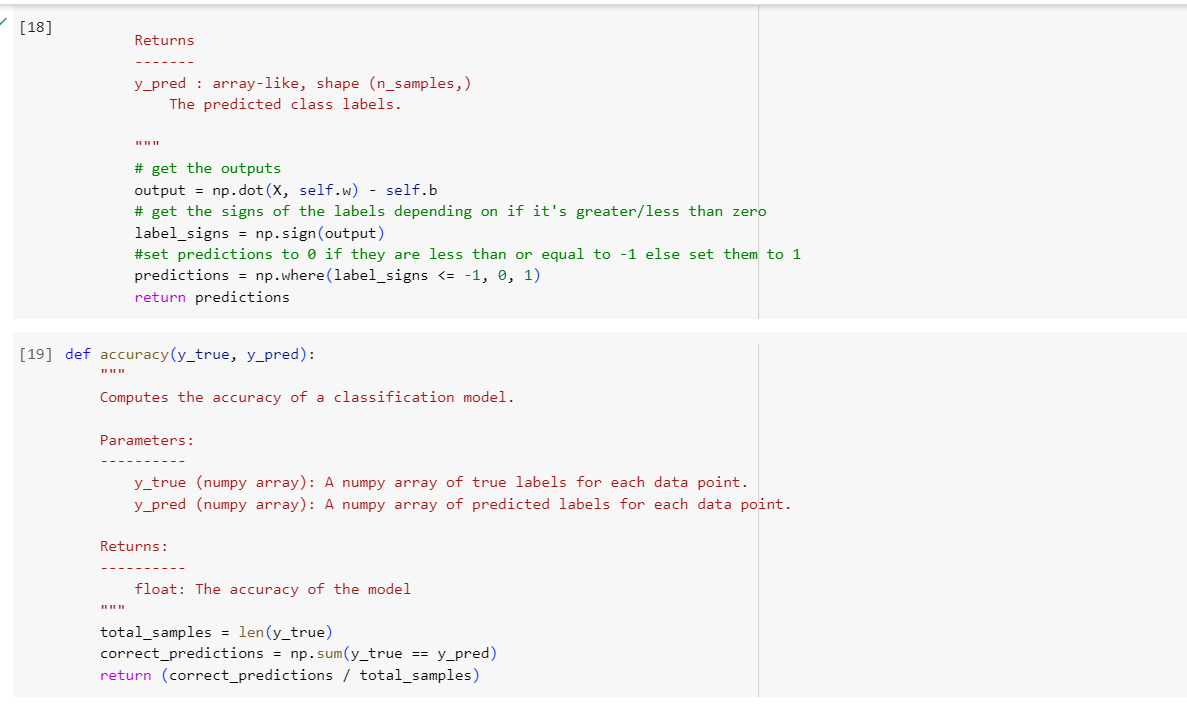


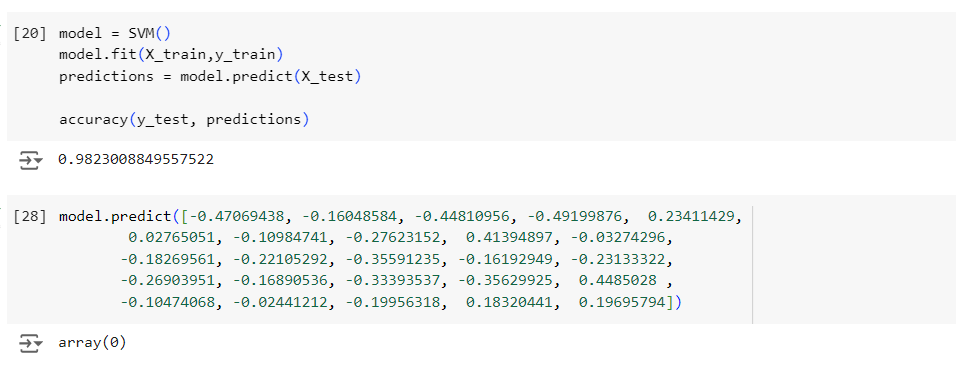


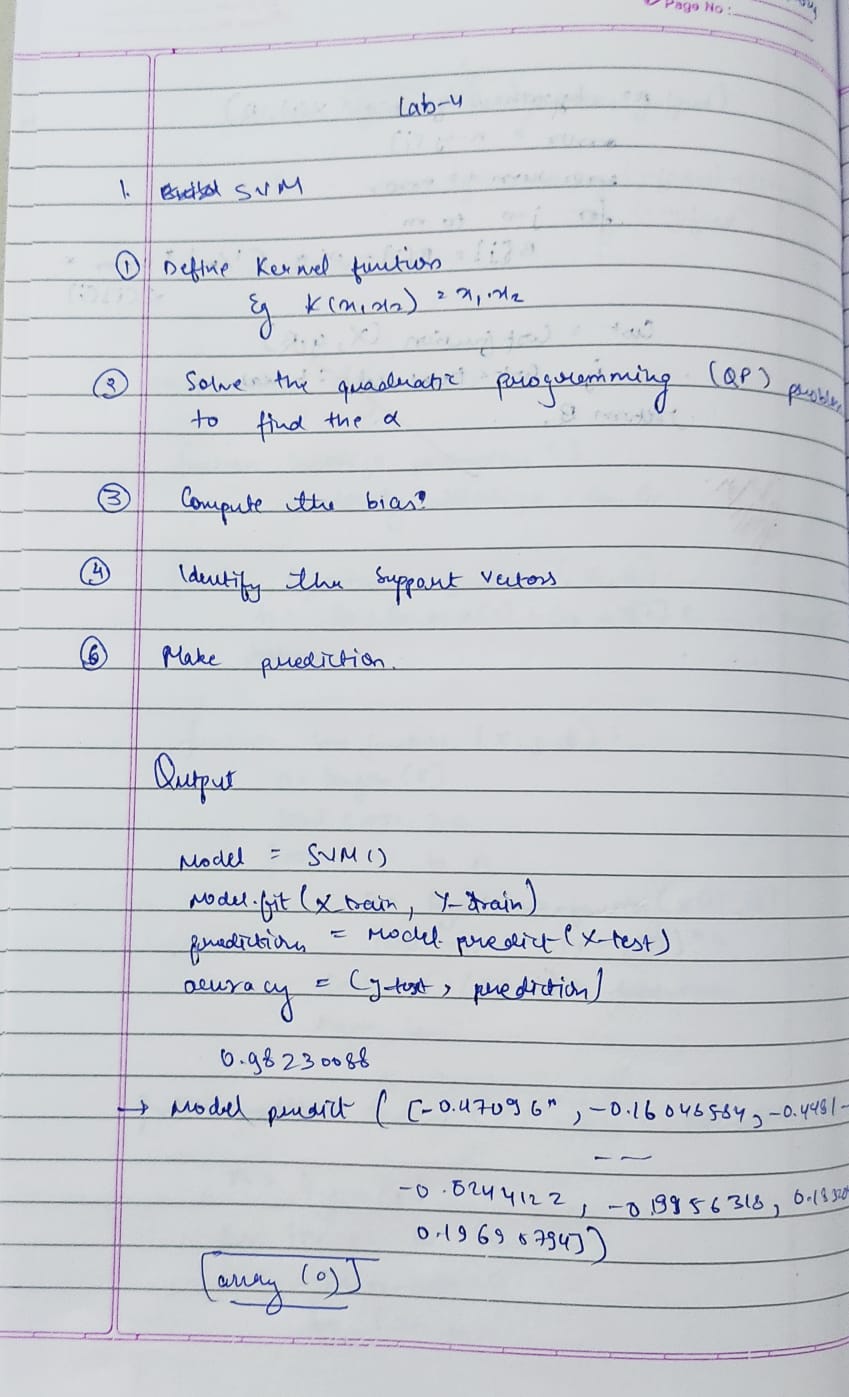






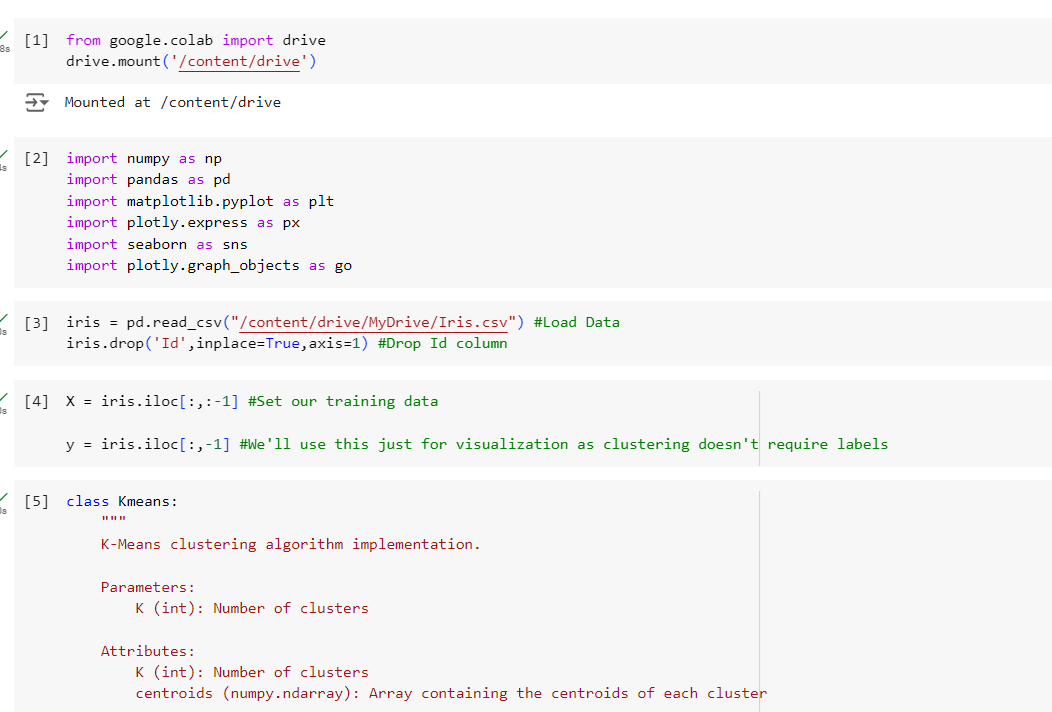


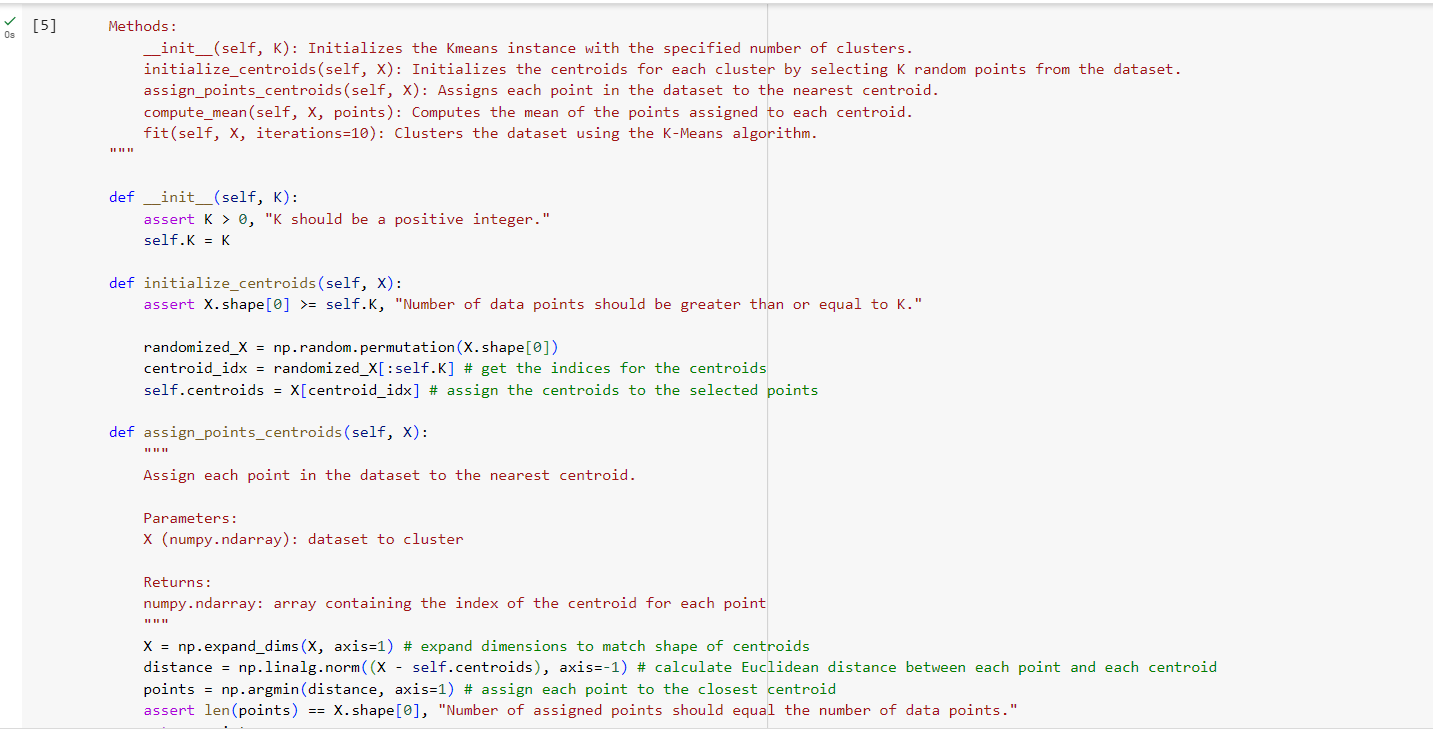


**Snapshot:**

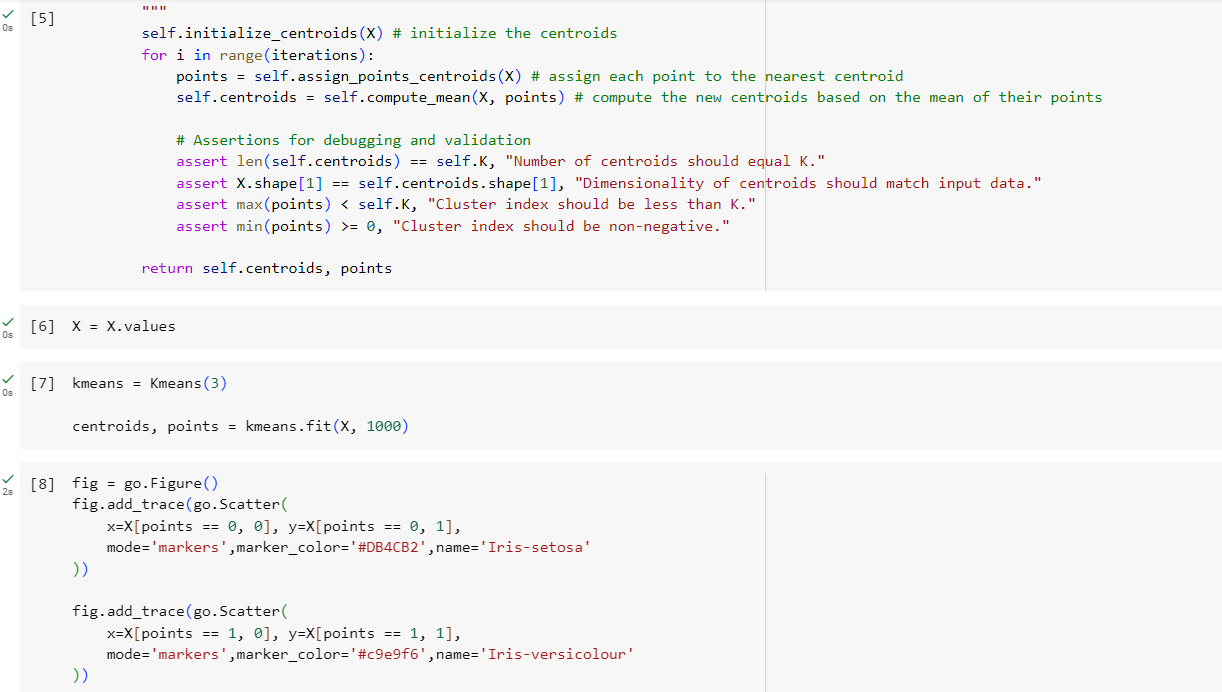
**Build k-means algorithm to cluster a set of data stored in a .CSV file.**

**Code:**



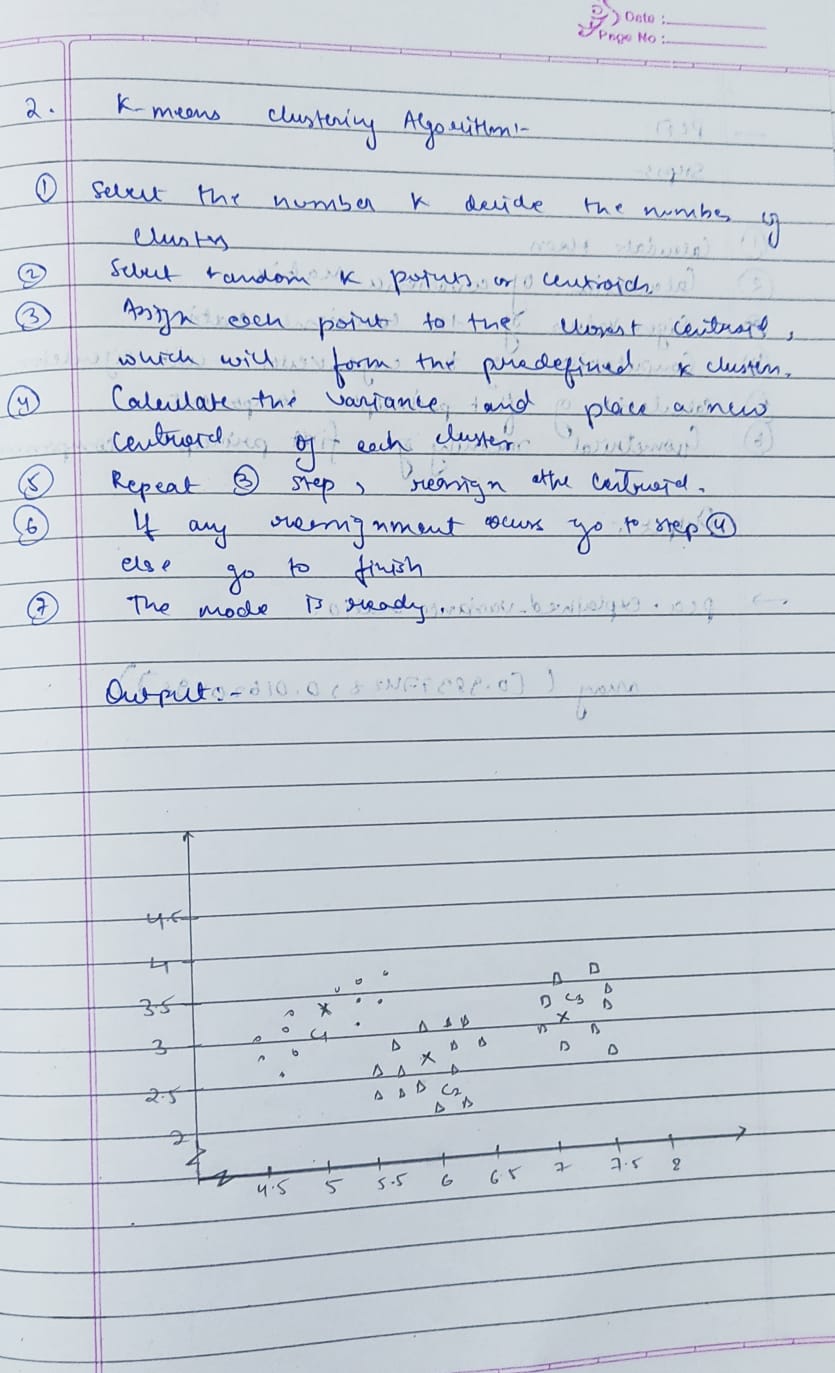






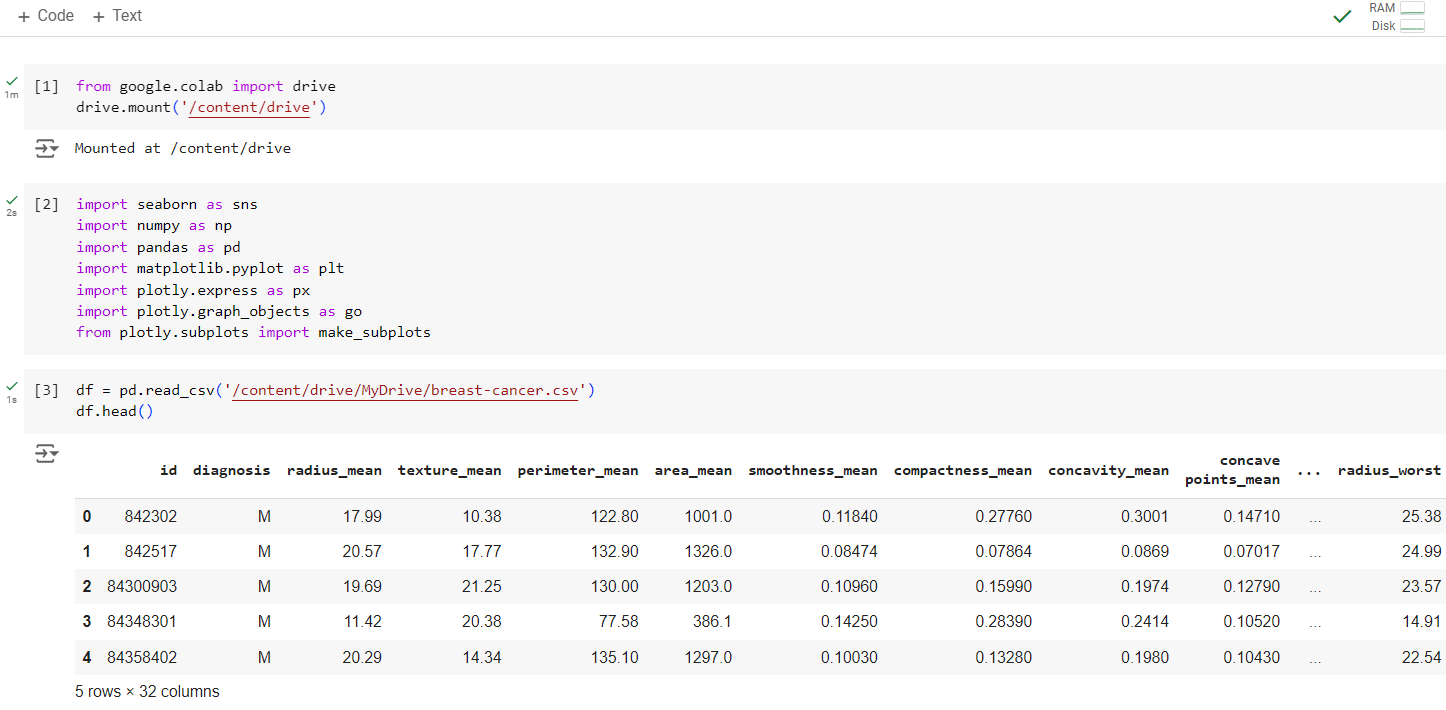


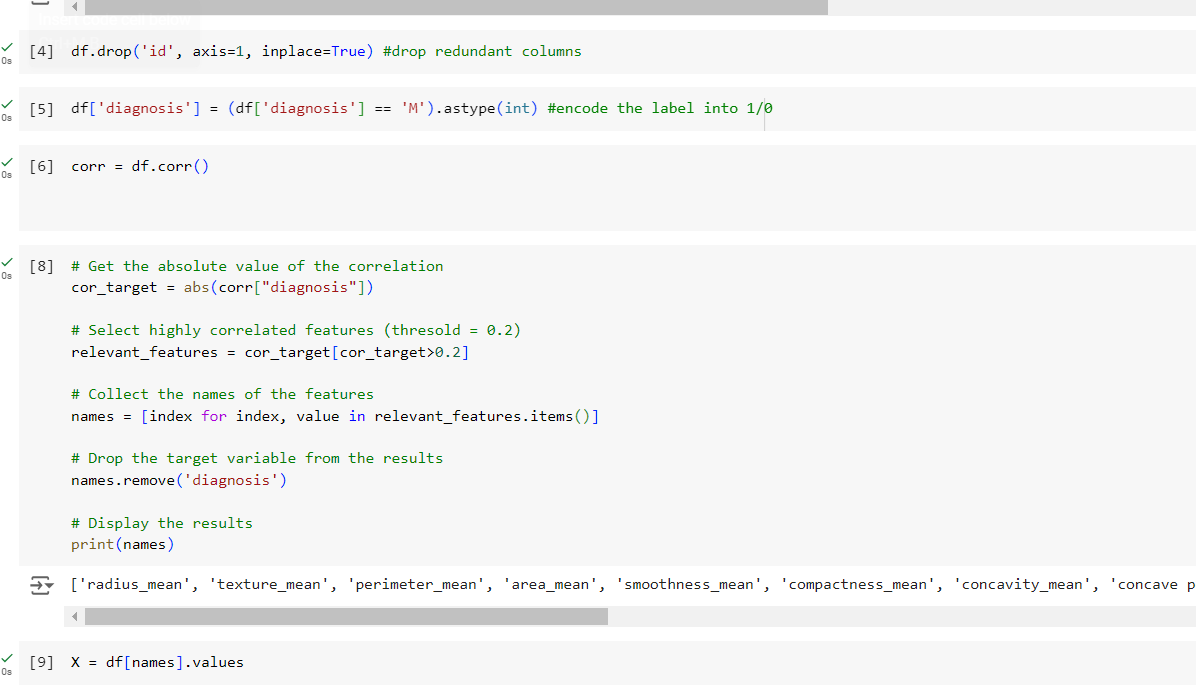
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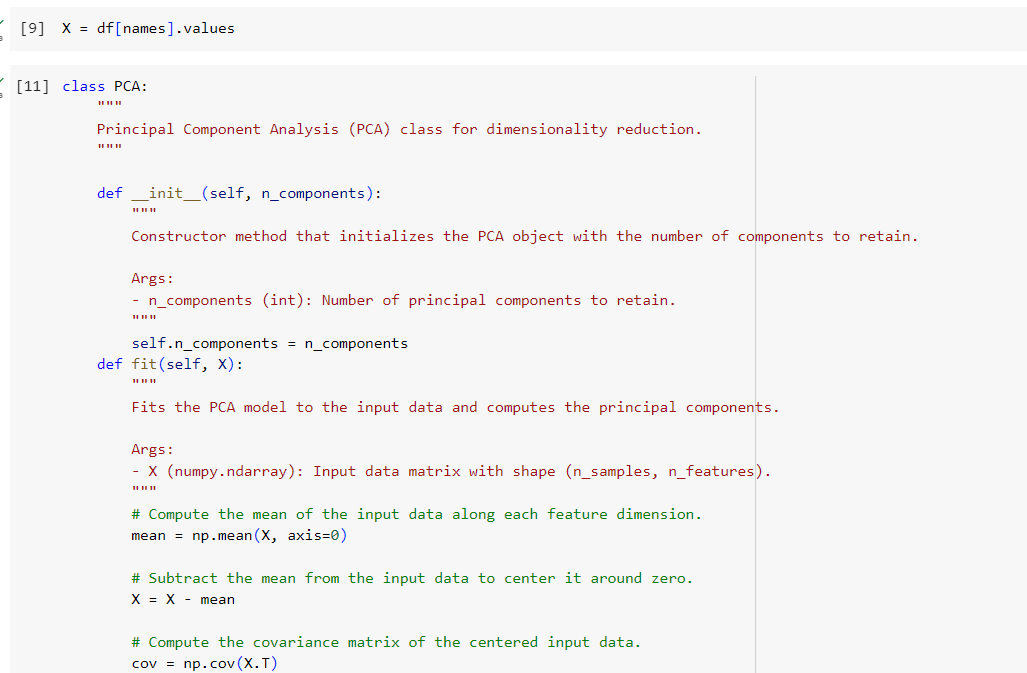


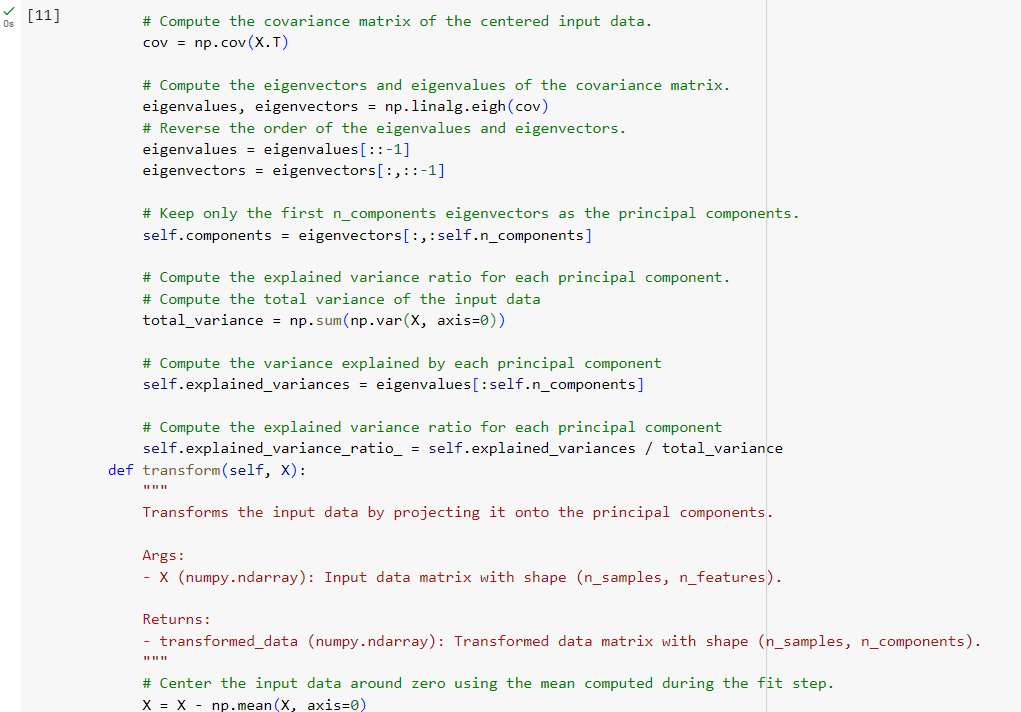
**Implement dimensionality reduction using principle component analysis (PCA).**

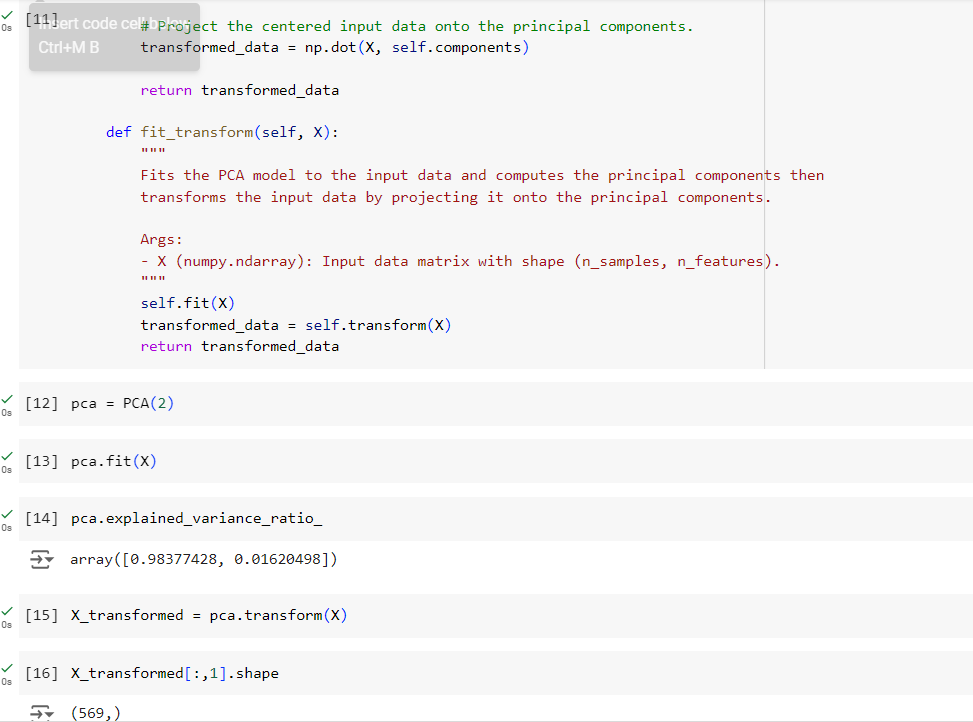
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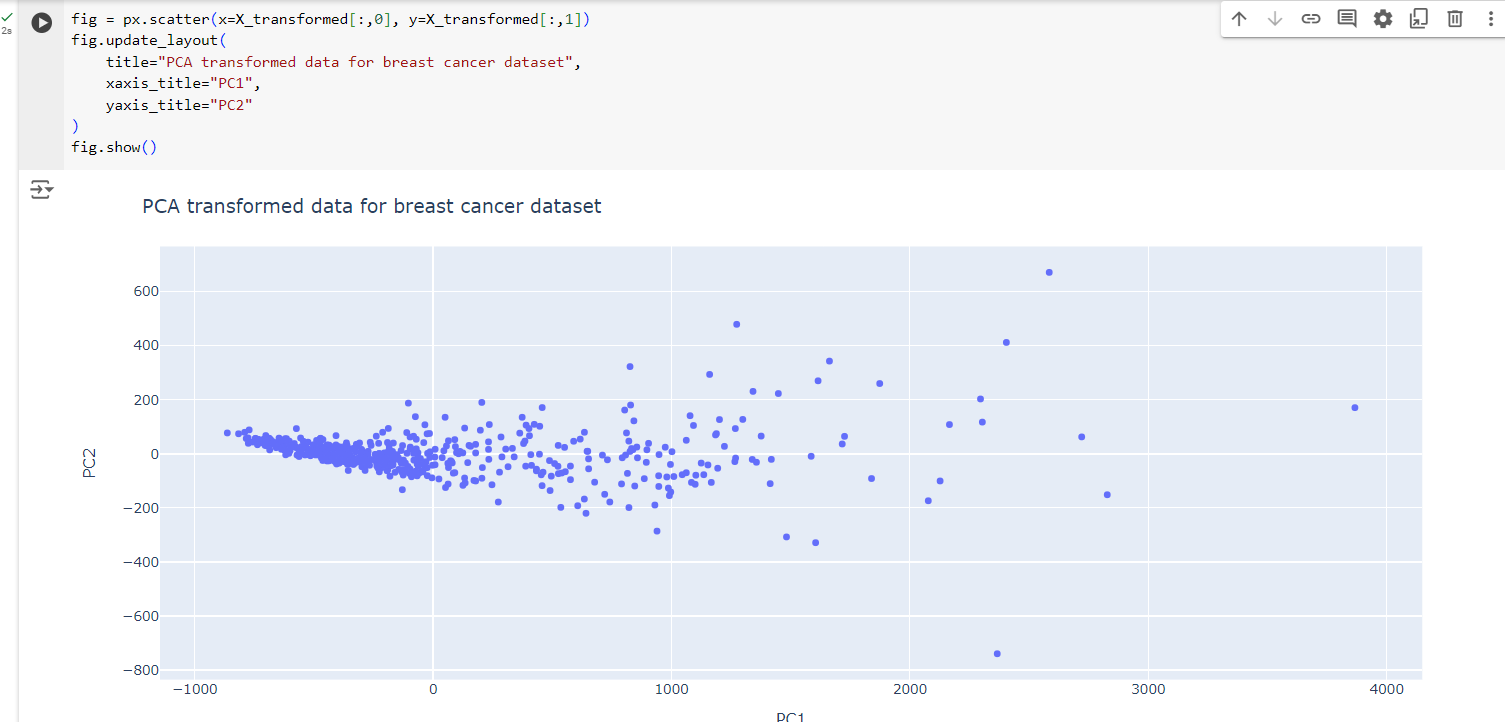












**Snapshot:**

