**Program 1**

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

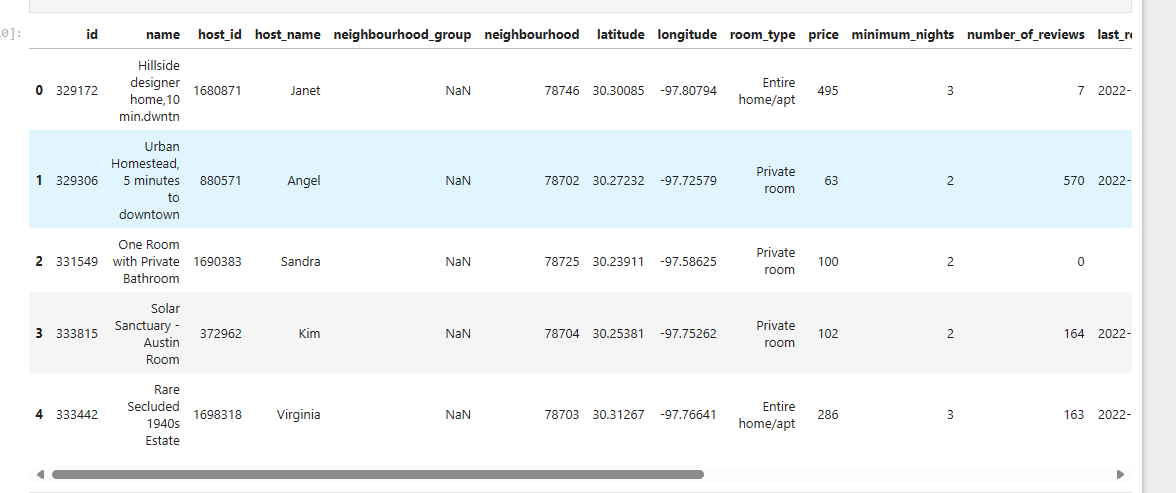
**Code:**

**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",

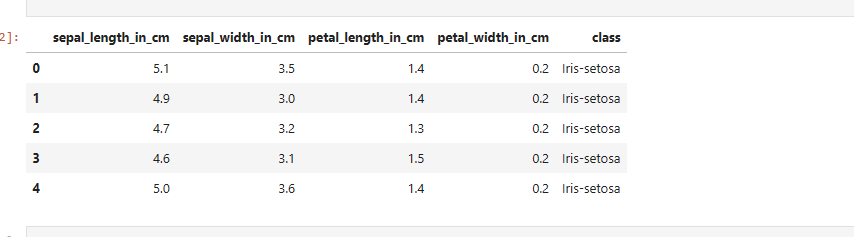
"petal\_length\_in\_cm",

"petal\_width\_in\_cm",

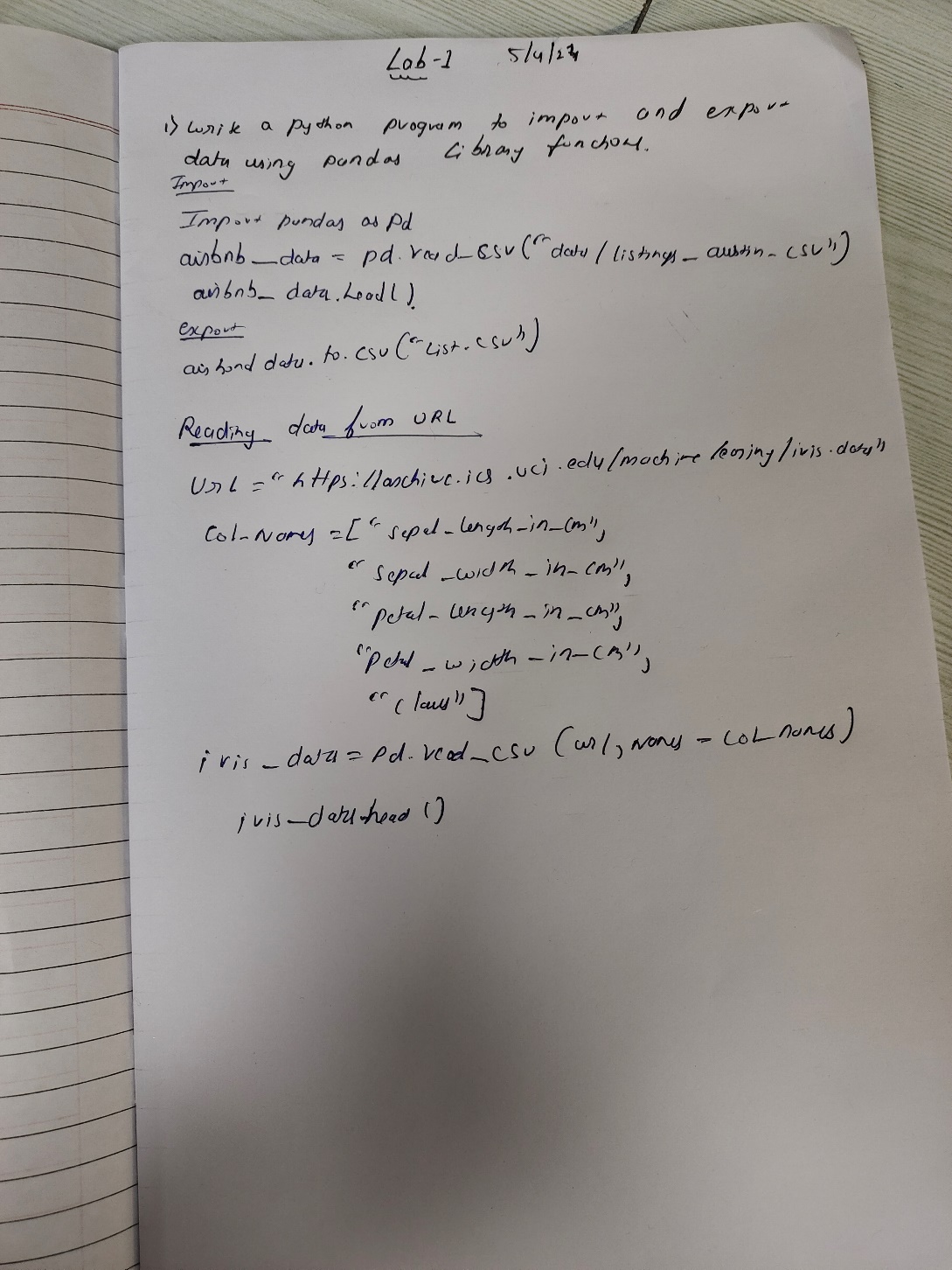
"class"]

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

iris\_data.head()

****

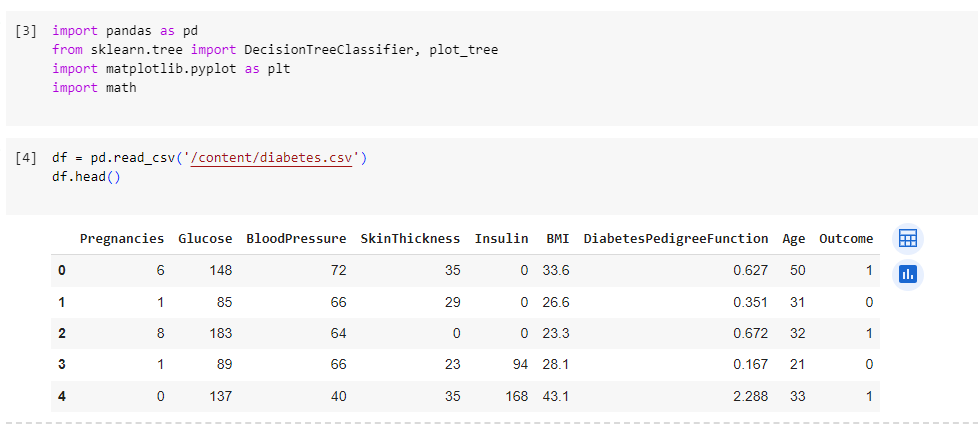
**Screenshot from the lab record:**

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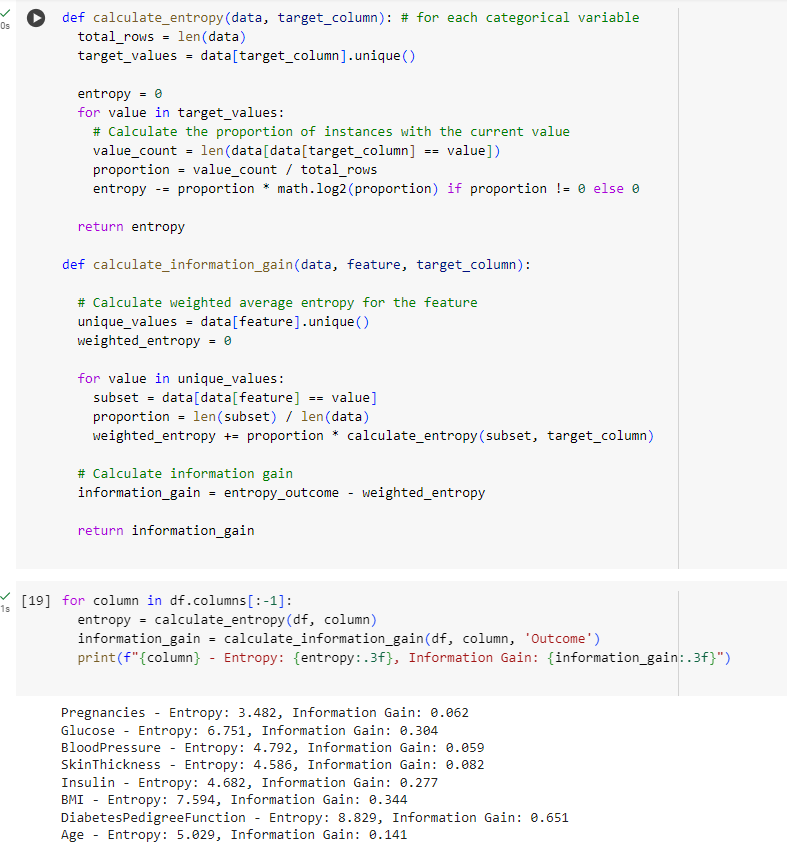
**Program 2**

Use an appropriate data set for building the decision tree (ID3) and apply this knowledge to classify a new sample.

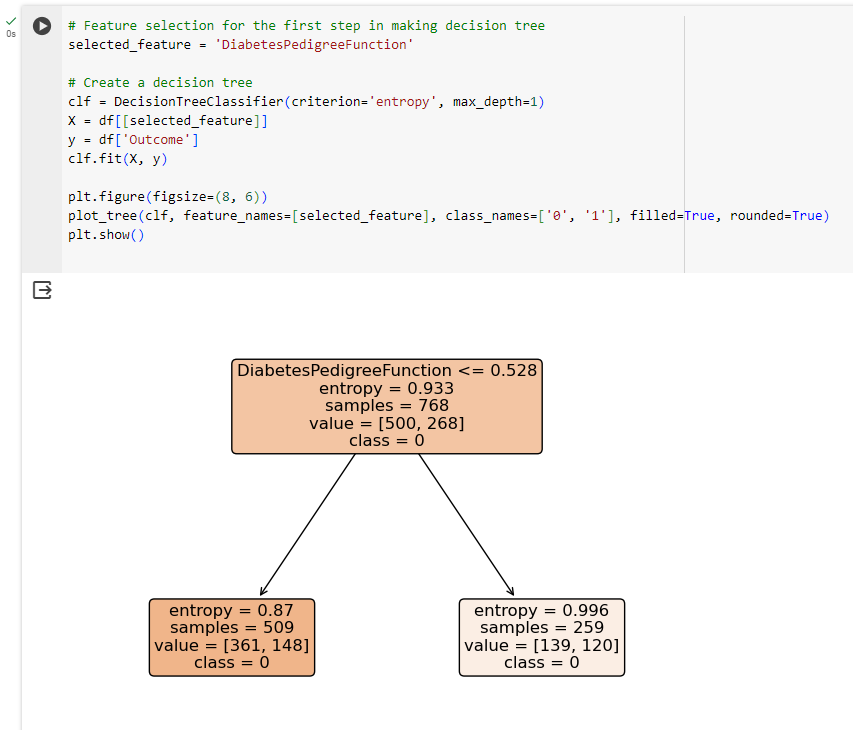
1.importing database

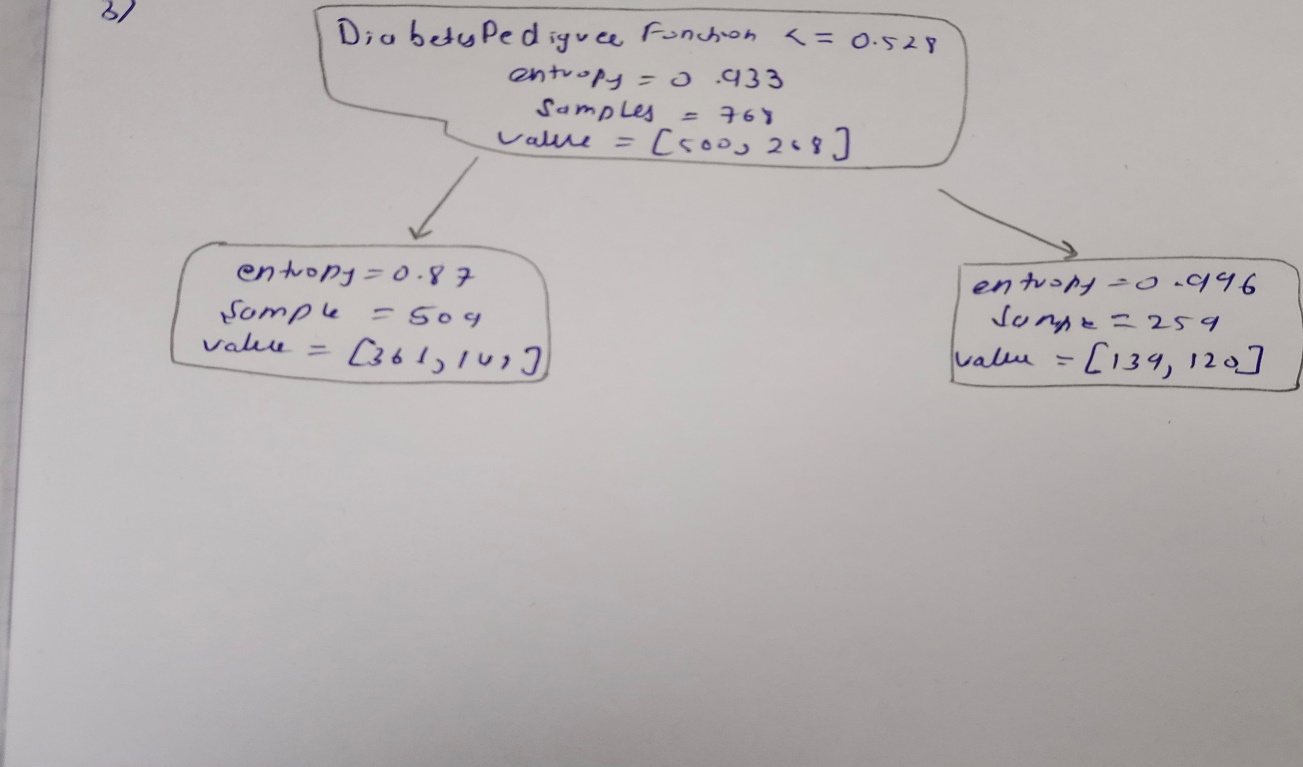


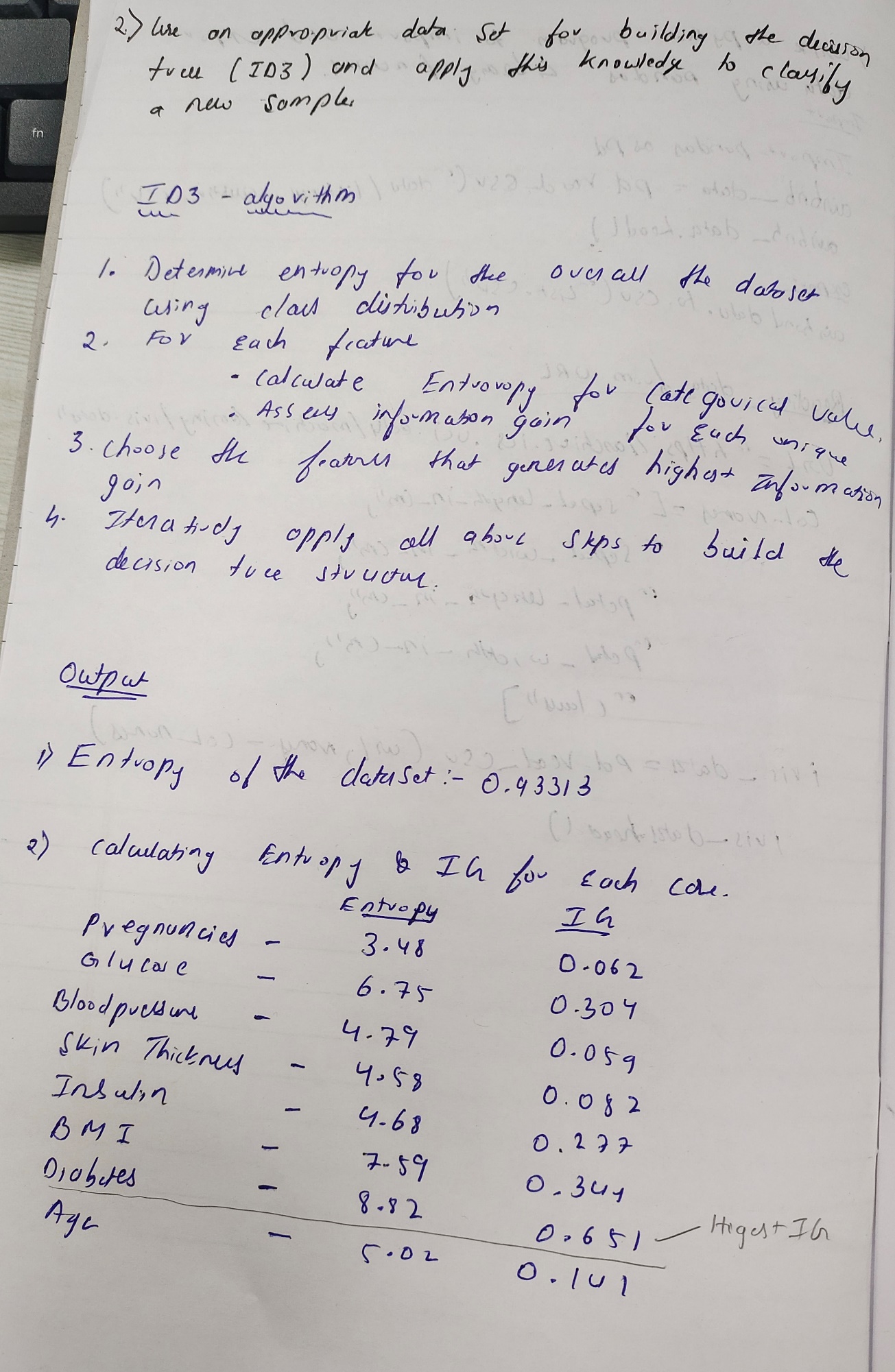
2.Calculating entropy and information gain.



3.Making Decision tree.



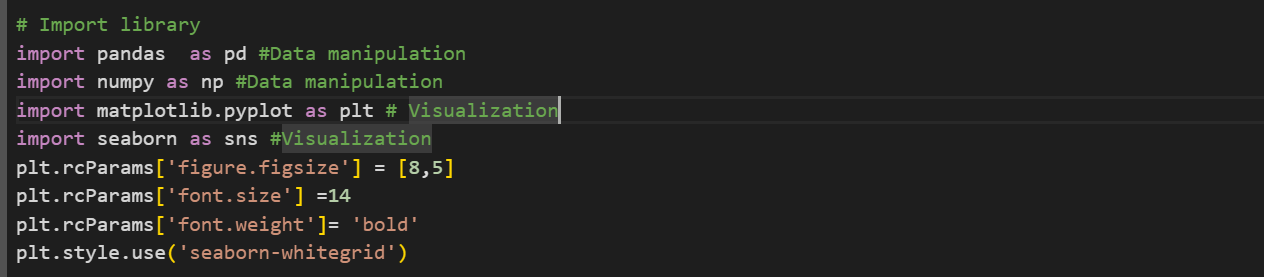
4.snapshot.



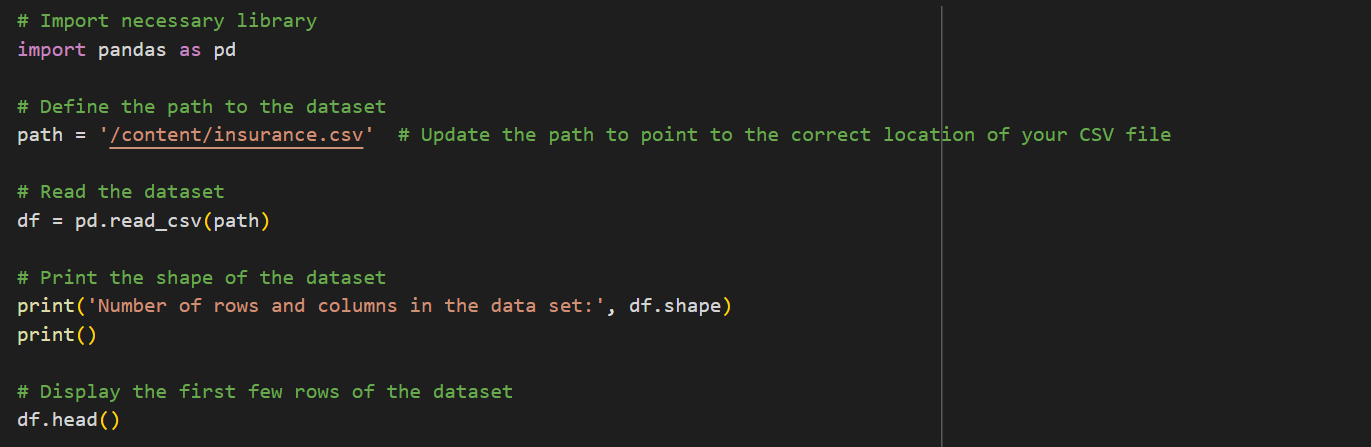
**Program 3**

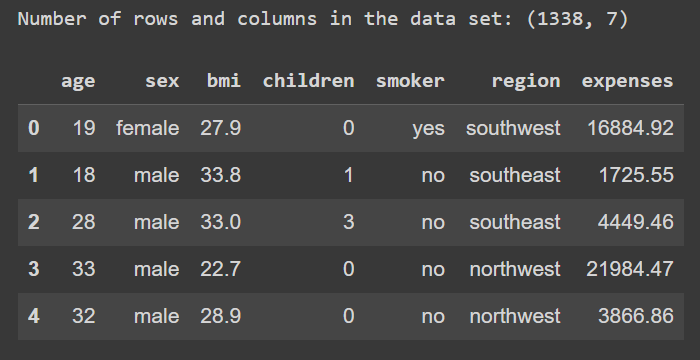
A .Implement Linear Regression algorithm using appropriate dataset.

1.importing library.

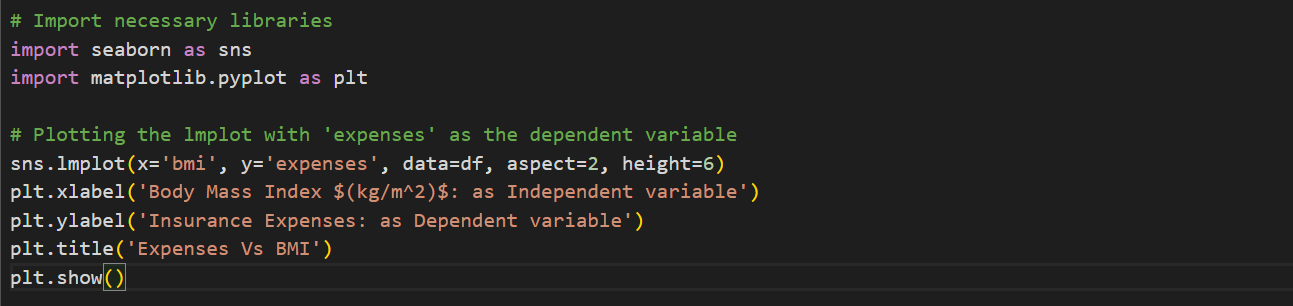


2.importing database.

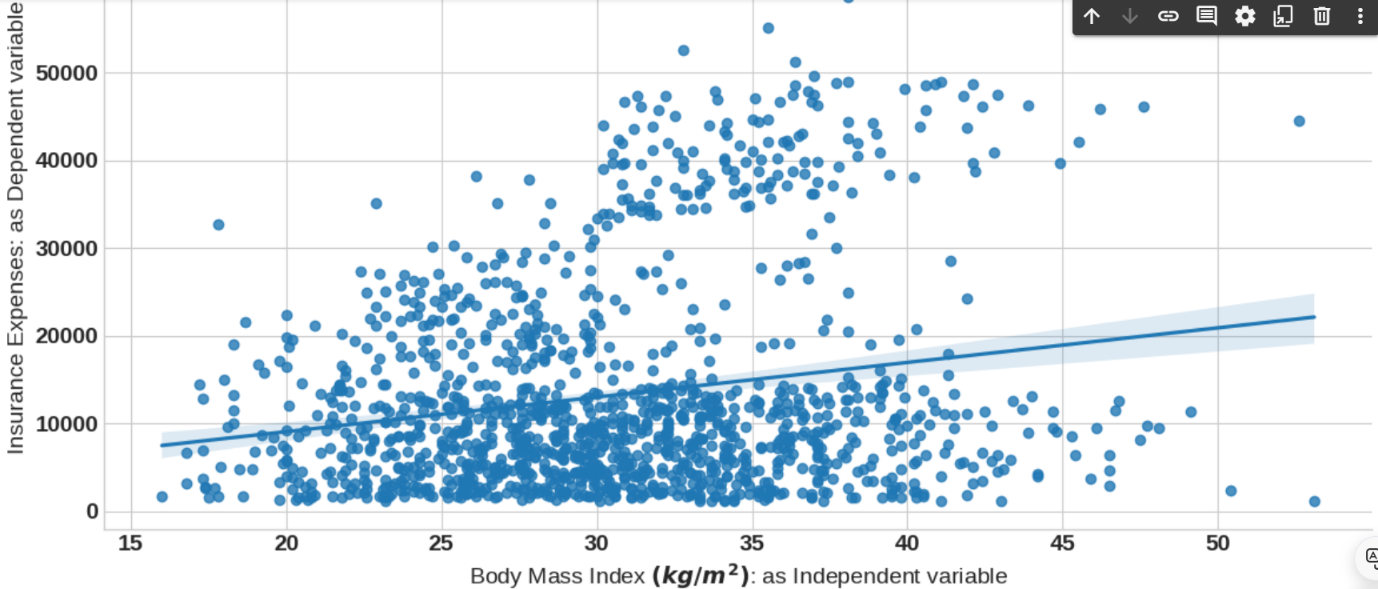




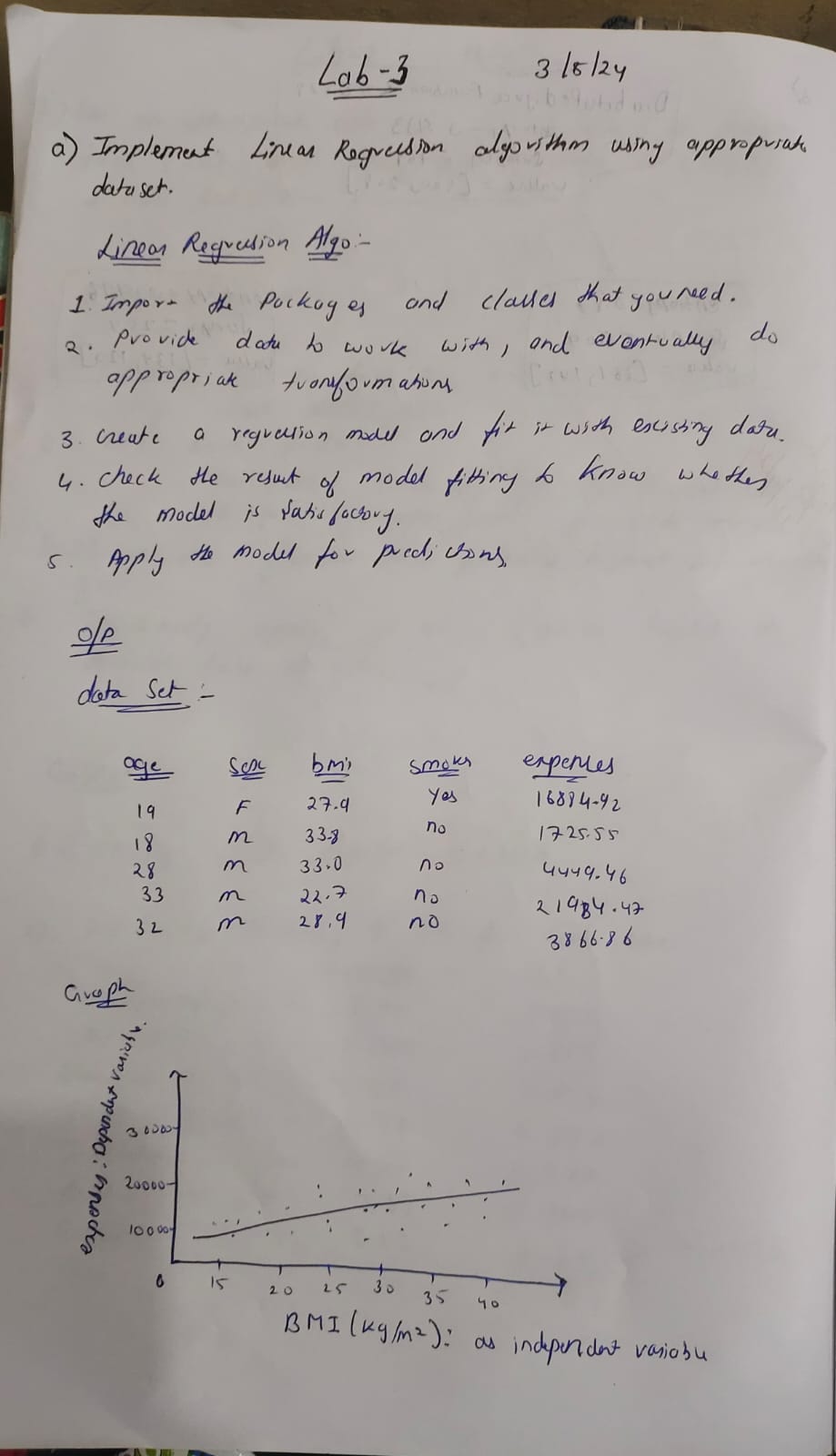
3.Plotting Graph.



4.Linear Regression Graph.

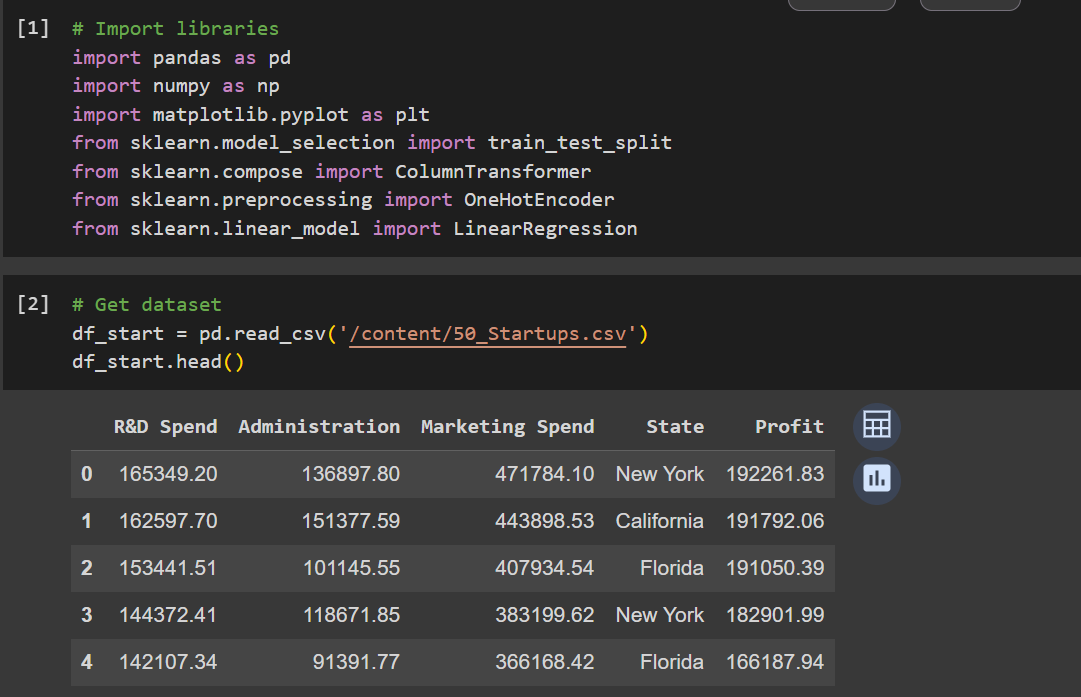


5.Snapshots.



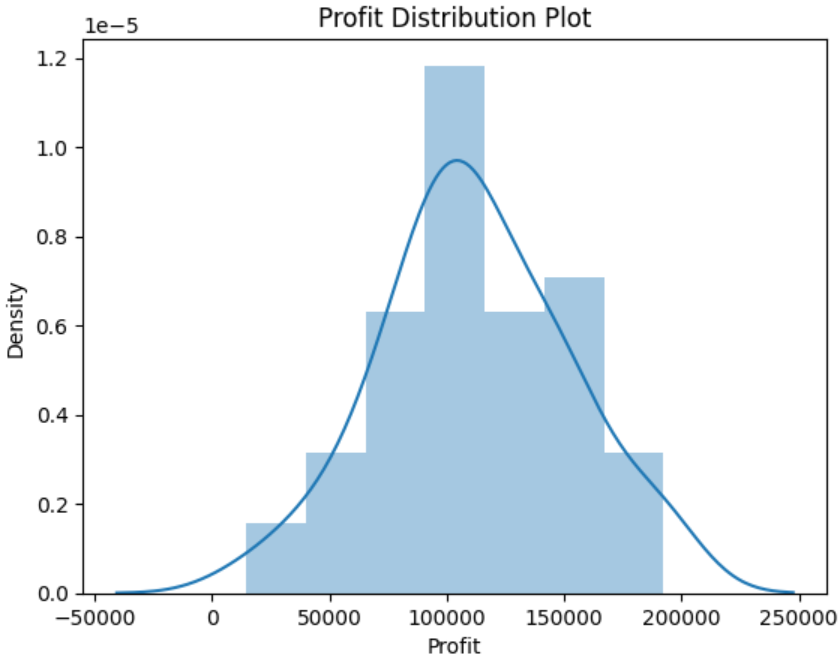
B .Implement Multi-Linear Regression algorithm using appropriate dataset.

1.importing library and dataset.

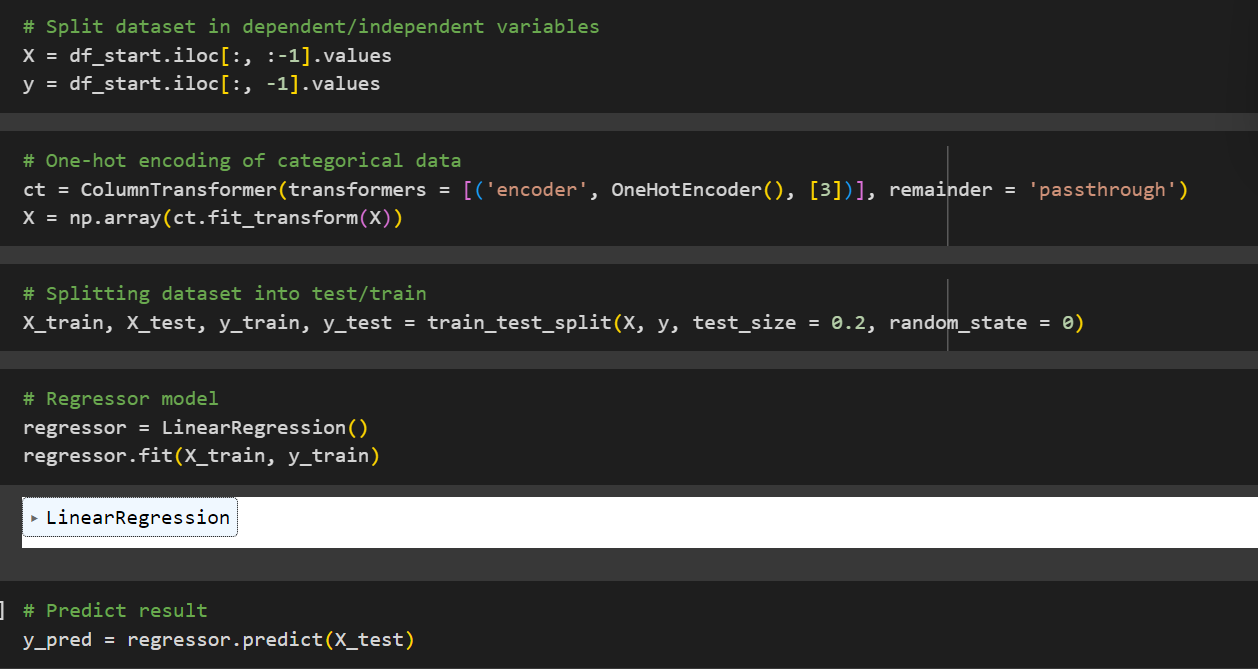


2.Data distribution.

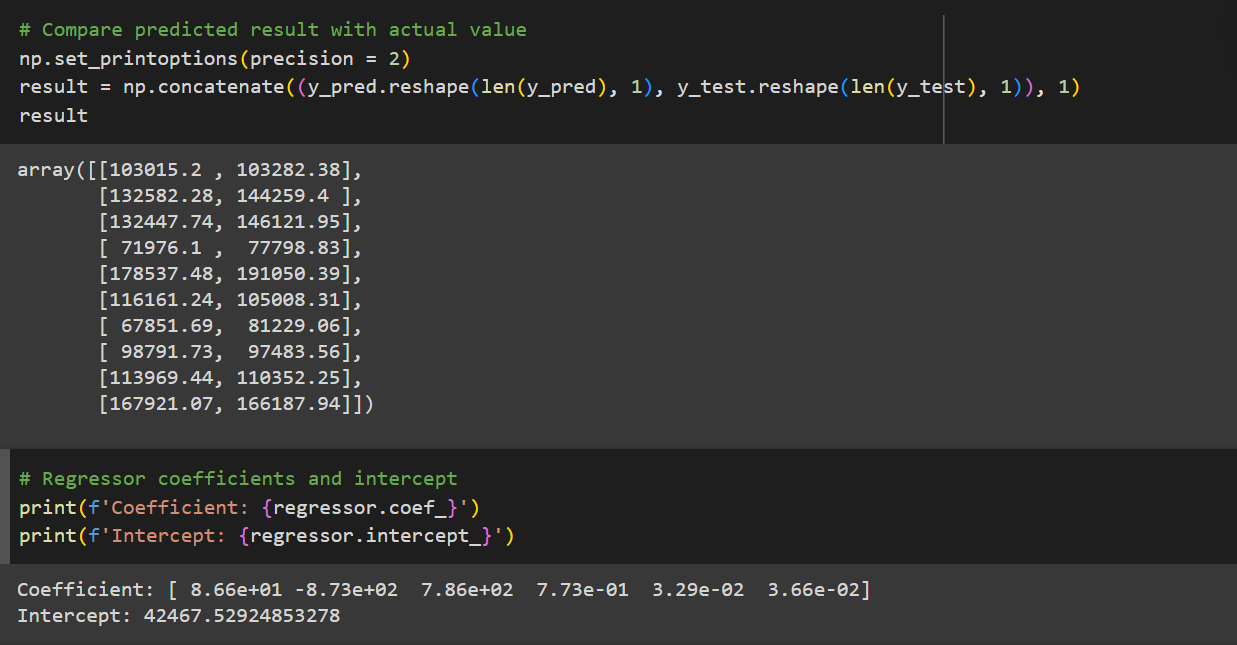
3.Plotting graph.



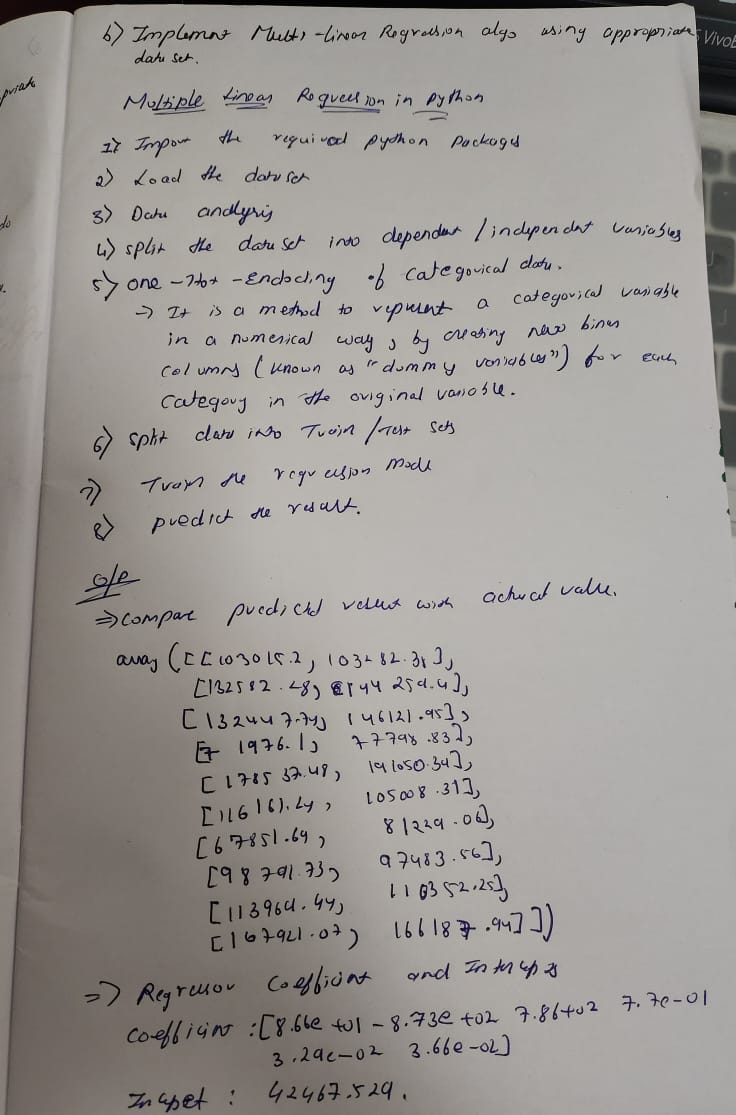
4.Predicting result.



5.Result.

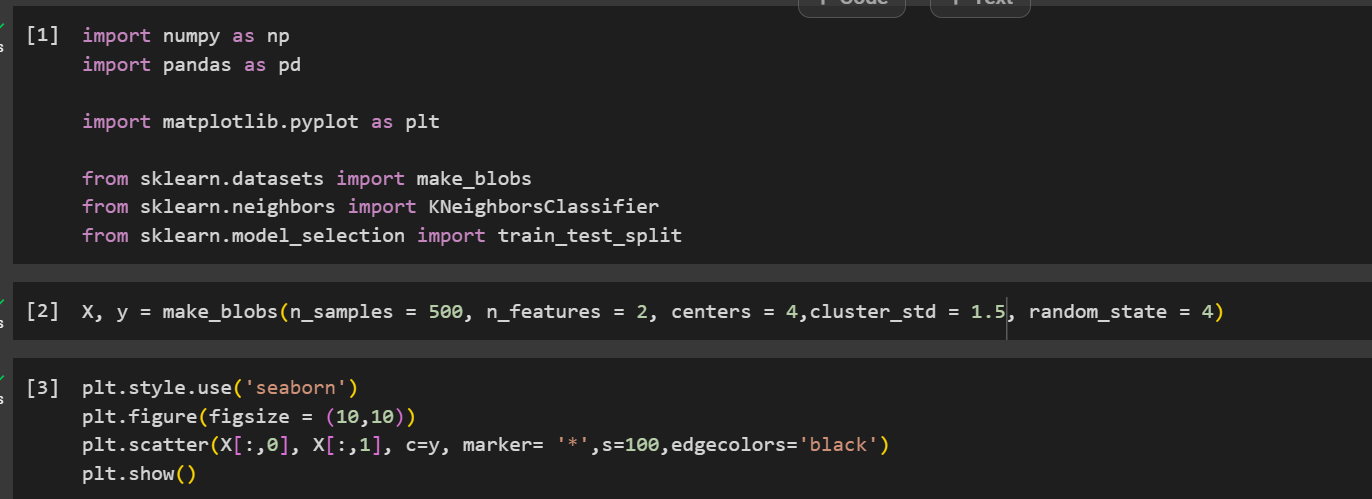


6.snapshots.

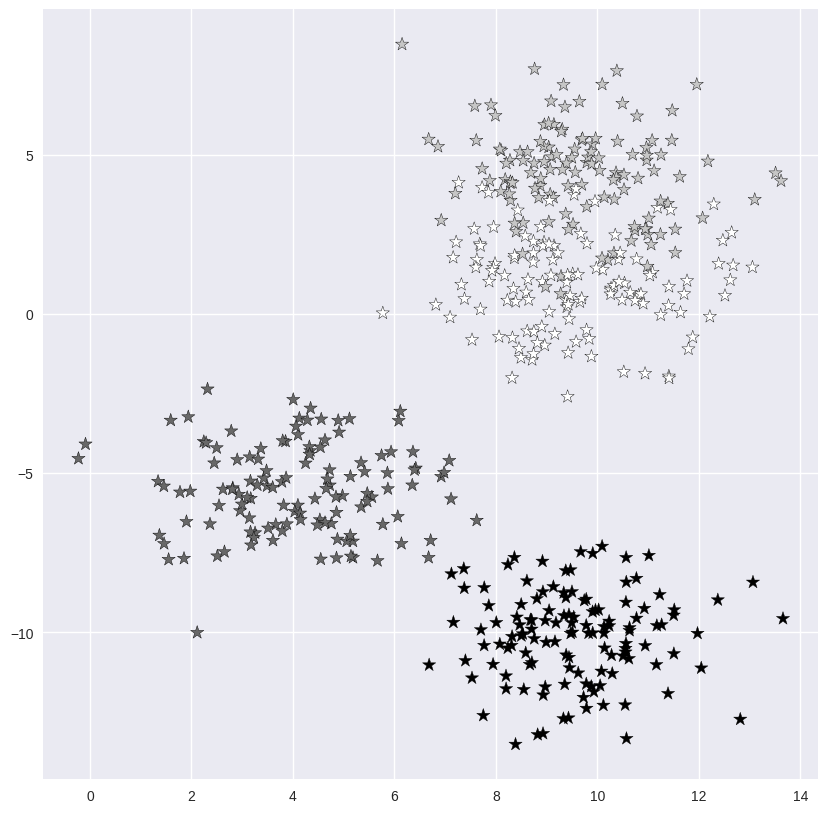


C .Implementation of kNN-Algorithm.

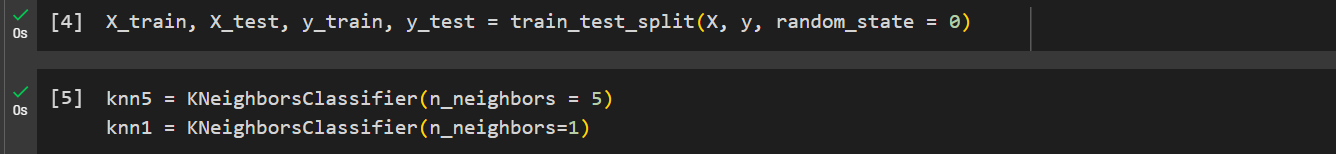
1.Importing dataset and modules.



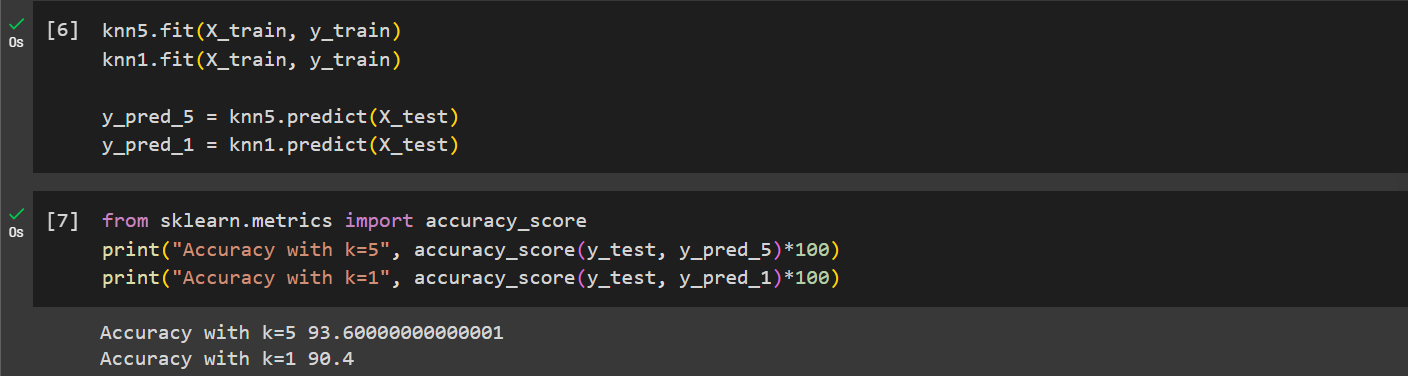
2.Visualize the dataset.



3.KNN classifier and Implementation.



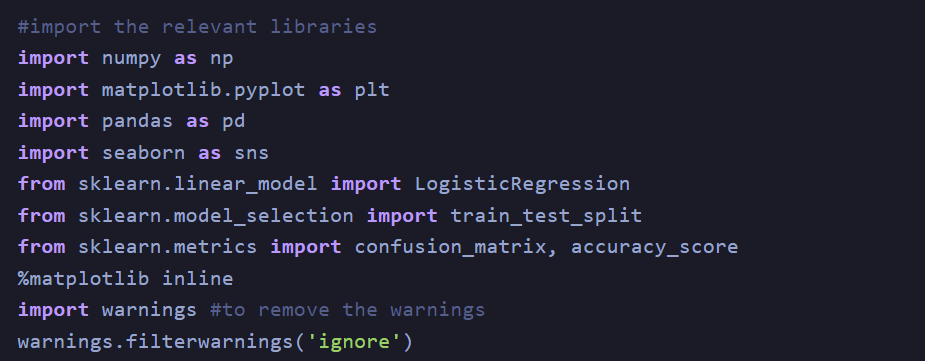
4.Predict Accuracy for both k values.



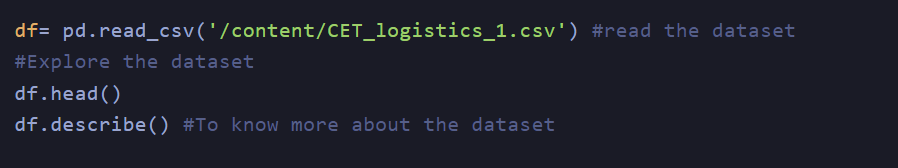
**Program 4**

 Build Logistic Regression Model for a given dataset

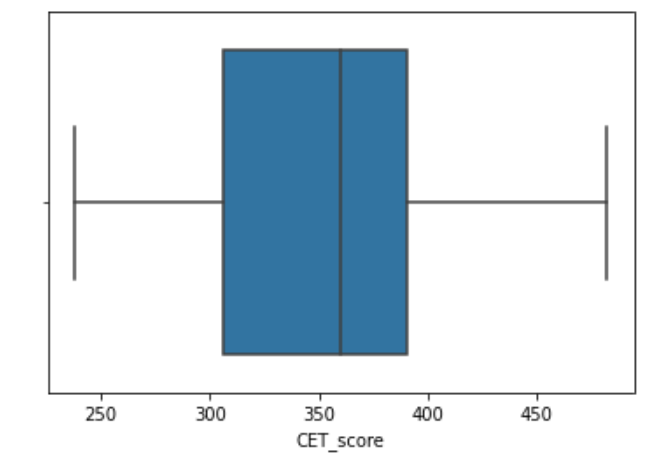
1.Import required libraries.



2.Load, visualize and explore the dataset



3.Deal with the outliers



### 4. Define dependent and independent variables and then split the data into a training set and testing set.

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### 5. Fit a logistic regression model using sklearn.

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### 6.Output.

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