22103220

Gaurav Rajput

B8

Q1:

SOl:

import numpy as np

import pandas as pd

from sklearn.datasets import load\_iris

from sklearn.model\_selection import train\_test\_split

from sklearn.preprocessing import StandardScaler

from sklearn.linear\_model import LogisticRegression

from sklearn.linear\_model import LinearRegression

from sklearn.impute import SimpleImputer

from sklearn.metrics import accuracy\_score, precision\_score, recall\_score, f1\_score

import matplotlib.pyplot as plt

import seaborn as sns

data= load\_iris()

print(data)

df = pd.DataFrame(data.data, columns=data.feature\_names)

df['target'] = data.target

df[0:10]

imputer = SimpleImputer(strategy="mean")

X = imputer.fit\_transform(df.drop(columns='target'))

y = df['target'] <2

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=0)

scaler=StandardScaler()

X\_train=scaler.fit\_transform(X\_train)

X\_test=scaler.transform(X\_test)

#model=LogisticRegression()

model=LinearRegression()

model.fit(X\_train,y\_train)

y\_pred = model.predict(X\_test)

print(y\_pred)

accuracy = accuracy\_score(y\_test, y\_pred)

precision = precision\_score(y\_test, y\_pred)

recall = recall\_score(y\_test, y\_pred)

f1 = f1\_score(y\_test, y\_pred)

print("Accuracy:", accuracy)

print("Precision:", precision)

print("Recall:", recall)

print("F1 Score:", f1)

print()