

PRACTICAL NO 7

Code :

```
import pandas as pd
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.svm import SVC
from sklearn.metrics import accuracy_score

iris = load_iris()
X = iris.data
y = iris.target

# Describe function to get a statistical summary of the dataset
print("Multiple Regression Model Dataset Summary:\n")
print(pd.DataFrame(X).describe())

# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Choose a classifier. In this example, we will use the Support Vector Machine (SVM) classifier
svm = SVC()

# Fit the model on the training data
svm.fit(X_train, y_train)

# Predict the target variable on the testing data
y_pred = svm.predict(X_test)

# Evaluate the performance of the classifier using accuracy score
accuracy = accuracy_score(y_test, y_pred)
print(f"\nAccuracy: {accuracy:.2f}")
```

Output :

Multiple Regression Model Dataset Summary:

	0	1	2	3
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

Accuracy: 1.00