

Write a program to implement SVM classifier, compare with decision tree algorithm.

```
import numpy as np

from sklearn import datasets

from sklearn.model_selection import train_test_split

from sklearn.svm import SVC

from sklearn.tree import DecisionTreeClassifier

from sklearn.metrics import accuracy_score


# Load a sample dataset (Iris dataset in this case)

iris = datasets.load_iris()

X = iris.data

y = iris.target


# Split the dataset into training and testing sets

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)


# Create and train an SVM classifier

svm_classifier = SVC(kernel='linear')

svm_classifier.fit(X_train, y_train)


# Create and train a Decision Tree classifier

dt_classifier = DecisionTreeClassifier()

dt_classifier.fit(X_train, y_train)


# Make predictions with both classifiers

svm_predictions = svm_classifier.predict(X_test)

dt_predictions = dt_classifier.predict(X_test)
```

```
# Calculate accuracy for both classifiers

svm_accuracy = accuracy_score(y_test, svm_predictions)

dt_accuracy = accuracy_score(y_test, dt_predictions)


print("SVM Classifier Accuracy:", svm_accuracy)

print("Decision Tree Classifier Accuracy:", dt_accuracy)
```