

Step 1: Import necessary libraries

```
import pandas as pd
```

```
import numpy as np
```

```
from sklearn.model_selection import train_test_split
```

```
from sklearn.svm import SVC
```

```
from sklearn.metrics import accuracy_score, classification_report, confusion_matrix
```

Step 2: Load the Dataset

For this example, let's assume the datasets are stored in CSV files

Iris dataset

```
iris_data = pd.read_csv('/content/Iris.csv')
```

Heart Disease dataset

```
heart_data = pd.read_csv('/content/heart.csv')
```

Step 3: Data Preprocessing

Iris dataset

```
X_iris = iris_data.drop(columns=['Species']) # Replace 'species' with target column name in Iris dataset
```

```
y_iris = iris_data['Species']
```

Heart Disease dataset

```
X_heart = heart_data.drop(columns=['target']) # Replace 'target' with the target column name in Heart Disease dataset
```

```
y_heart = heart_data['target']
```

Step 4: Train-Test Split (50-50 split)

```
X_train_iris, X_test_iris, y_train_iris, y_test_iris = train_test_split(X_iris, y_iris, test_size=0.5, random_state=42)
```

```
X_train_heart, X_test_heart, y_train_heart, y_test_heart = train_test_split(X_heart, y_heart, test_size=0.5, random_state=42)
```

```
# Step 5: Train SVM Classifier
```

```
# For Iris dataset
```

```
svm_iris = SVC(kernel='linear', random_state=42) # You can try other kernels like 'rbf', 'poly', etc.
```

```
svm_iris.fit(X_train_iris, y_train_iris)
```

```
# For Heart Disease dataset
```

```
svm_heart = SVC(kernel='linear', random_state=42)
```

```
svm_heart.fit(X_train_heart, y_train_heart)
```

```
# Step 6: Evaluate Model
```

```
# Iris dataset evaluation
```

```
y_pred_iris = svm_iris.predict(X_test_iris)
```

```
print("Iris Dataset - Classification Report:\n", classification_report(y_test_iris, y_pred_iris))
```

```
print("Iris Dataset - Confusion Matrix:\n", confusion_matrix(y_test_iris, y_pred_iris))
```

```
print("Iris Dataset - Accuracy:", accuracy_score(y_test_iris, y_pred_iris))
```

```
# Heart Disease dataset evaluation
```

```
y_pred_heart = svm_heart.predict(X_test_heart)
```

```
print("Heart Disease Dataset - Classification Report:\n", classification_report(y_test_heart,  
y_pred_heart))
```

```
print("Heart Disease Dataset - Confusion Matrix:\n", confusion_matrix(y_test_heart, y_pred_heart))
```

```
print("Heart Disease Dataset - Accuracy:", accuracy_score(y_test_heart, y_pred_heart))
```