9.Write a python programme to implement K-NN.

```python
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.neighbors import KNeighborsClassifier
from sklearn.metrics import accuracy_score
```

```python
# Load the Iris dataset
iris = load_iris()
X = pd.DataFrame(iris.data, columns=iris.feature_names)
y = pd.Series(iris.target)
```

```python
# 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)
```

```python
# Feature scaling for better performance
scaler = StandardScaler()
X_train_scaled = scaler.fit_transform(X_train)
X_test_scaled = scaler.transform(X_test)
```

```python
# Initialize and train the KNN classifier
knn = KNeighborsClassifier(n_neighbors=5)
knn.fit(X_train_scaled, y_train)
```

```python
# Make predictions and evaluate the model
y_pred = knn.predict(X_test_scaled)
accuracy = accuracy_score(y_test, y_pred)
print(f"KNN Classifier Accuracy: {accuracy * 100:.2f}%")
```

```
KNN Classifier Accuracy: 100.00%
```