

## Lab Work:

1. Create a file named **data.csv** with some sample data:

feature1,feature2,feature3,target

1,2,3,0

4,5,6,1

7,8,9,0

10,11,12,1

13,14,15,0

2. Create the Main Python Script

```
import pandas as pd
```

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

```
from sklearn.ensemble import RandomForestClassifier
```

```
from sklearn.metrics import accuracy_score
```

```
data = pd.read_csv('data.csv')
```

```
# Simple data preprocessing
```

```
<write your code here>
```

```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
```

```
model = RandomForestClassifier(n_estimators=100)
```

```
model.fit(X_train, y_train)
```

```
y_pred = model.predict(X_test)
```

```
accuracy = accuracy_score(y_test, y_pred)
```

```
print(f'Accuracy: {accuracy:.2f}')
```