Phase 4: Development Part 2

1.Selecting the Machine learning model

```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score, classification_report, confusion_matrix
```

Machine learning model=Random Forest
Random Forest grows multiple decision trees which are merged together for a more accurate prediction

2.Training the Model

```
rf_model = RandomForestClassifier(n_estimators=100, random_state=42)
rf_model.fit(X_train, y_train)
```

```
RandomForestClassifier
RandomForestClassifier(random_state=42)
```

In above code, I have trained the model by using **fit** function of **sklearn.ensemble** module.
n_estimators=the number of trees you want to build before taking the maximum voting or averages of predictions.

3.Evaluating its performance

```
y_pred = rf_model.predict(X_test)
accuracy = accuracy_score(y_test, y_pred)
print("Accuracy:", accuracy)
```

```
Accuracy: 0.7207792207792207
```

This code explains that, by using **X_test** the model was predicting. And the by using **accuracy_score**, the performance is evaluated.