```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
df = pd.read_csv('diabetes.csv')
```

```
df.isna().sum()
```

```
y = df['Outcome']
```

```
x = df.drop('Outcome', axis=1)
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=30)
```

```
from sklearn.neighbors import KNeighborsClassifier
model = KNeighborsClassifier(n_neighbors=5)
model.fit(x_train, y_train)
y_pred = model.predict(x_test)
df1 = {'Acutual':y_test, 'Predicted':y_pred}
df1
```

```
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
sns.heatmap(cm, annot=True, annot_kws={'size':16})
plt.title("Confusion Matrix")
plt.xlabel("Y Predict")
plt.ylabel("Y Test")
plt.show()
```

```
from sklearn.metrics import accuracy_score, precision_score, recall_score, mean_absolute_error
print(accuracy_score(y_test, y_pred).round(2))
print(precision_score(y_test, y_pred).round(2))   #TP/TP+FP
print(recall_score(y_test, y_pred).round(2))      #TP/FN+FP
print(mean_absolute_error(y_test, y_pred).round(2))
```