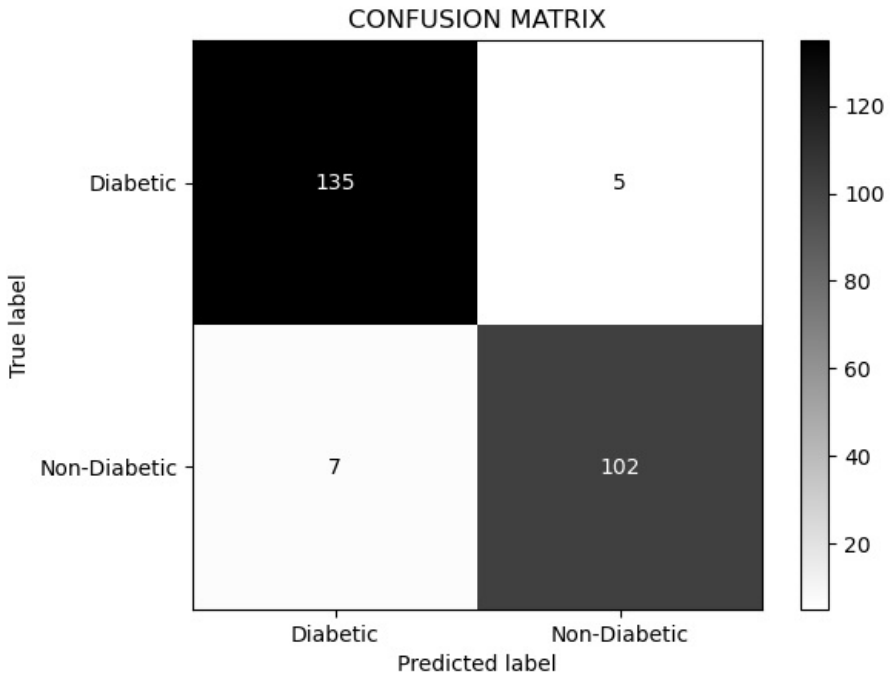
In [14]:
```
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, confusion_matrix, ConfusionMatrixDisplay
from sklearn.model_selection import train_test_split

df = pd.read_csv("HEALTH_DATASET.csv")
df

x = df.iloc[:,0:2]
y = df.iloc[:,-1]

x_train, x_test, y_train, y_test = train_test_split( x, y, test_size = 0.25, random_state = 40)

model = LogisticRegression()
model.fit(x_train, y_train)

y_pred = model.predict(x_test)

ac = accuracy_score( y_test, y_pred )
print("Accuracy: " , ac)

cm = confusion_matrix( y_test, y_pred )
print("Confusion Matrix: \n", cm)

cmd = ConfusionMatrixDisplay( confusion_matrix = cm, display_labels = ['Diabetic', 'Non-Diabetic'] )
cmd.plot(cmap=plt.cm.binary)  # Use binary colormap for black and white
plt.title('CONFUSION MATRIX')
plt.show()


y_predict = model.predict([[40, 85]])
print("Predicted value: ",y_predict[0])
```

```
Accuracy:  0.9518072289156626
Confusion Matrix:
 [[135   5]
 [  7 102]]
```




```
Predicted value:  0
C:\Anaconda\Lib\site-packages\sklearn\base.py:493: UserWarning: X does not have valid feature names, but LogisticRegression was fitted with feature names
  warnings.warn(
```