In [ ]:
```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score,accuracy_score
import matplotlib.pyplot as plt
```

In [ ]:
```
# loading data set
data = pd.read_csv('C:\\Users\\huzai\\OneDrive\\Desktop\\task2.csv')
```

In [ ]:
```
data.head()
```

Out[ ]:

	Total Payed	Total Miles
0	36.66	390.0
1	37.05	403.0
2	34.71	396.5
3	32.50	383.5
4	32.63	321.1

In [ ]:
```
#Dependant and independant Variables
Y = data['Total Payed']
X = data[['Total Miles']]
```

In [ ]:
```
regressor = LinearRegression()
```

In [ ]:
```
regressor.fit(X, Y)
```

Out[ ]:
```
LinearRegression
LinearRegression()
```

In [ ]:
```
y_pred = regressor.predict(X)
```

In [ ]:
```
mse = mean_squared_error(Y, y_pred)
r2 = r2_score(Y, y_pred)
print("Mean Squared Error:", mse)
print("R-squared:", r2)
```

```
Mean Squared Error: 6.358254682182502
R-squared: 0.2264796882652761
```

In [ ]:
```
plt.figure(figsize=(8, 6))
plt.scatter(Y, y_pred, color='blue', label='Actual vs. Predicted')
plt.plot(Y, Y, color='red', linewidth=2, label='Regression Line')
plt.title('Actual vs. Predicted House Prices with Regression Line(Best fit line)')
plt.xlabel('Actual House Price (unit area)')
plt.ylabel('Predicted House Price (unit area)')
plt.legend()
plt.show()
```

In [ ]:
```
result_df = pd.DataFrame({'Actual Price': Y, 'Predicted Price': y_pred})
print(result_df.head(20))
```

```
    Actual Price  Predicted Price
0          36.66        36.989273
1          37.05        37.944724
2          34.71        37.466999
3          32.50        36.511547
4          32.63        31.925379
5          34.45        37.084818
6          36.79        36.702637
7          37.44        35.651641
8          38.09        38.040270
9          38.09        37.180363
10         38.74        36.731301
11         39.00        37.371453
12         40.00        36.658540
13         36.21        35.666340
14         34.05        37.503747
15         41.79        38.238710
16         30.25        35.690594
17         38.83        35.930926
18         39.66        37.650739
```