

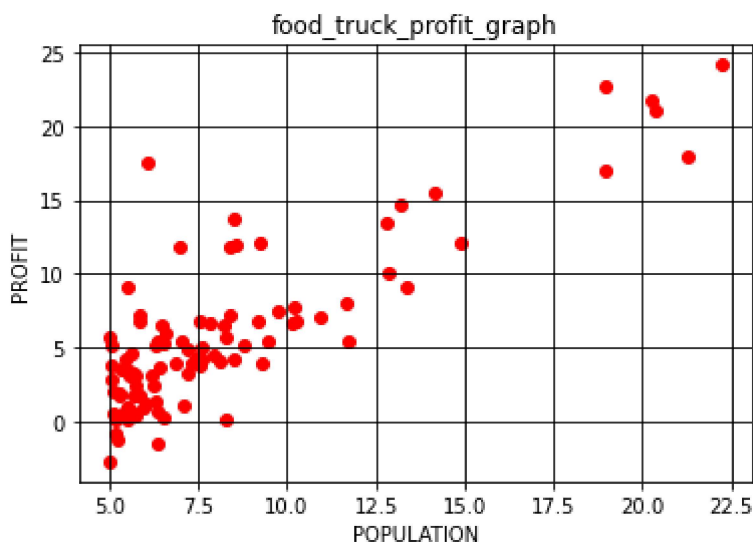
In [3]:

```
import numpy
from matplotlib import pyplot as plt
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
data=pd.read_csv("New Text Document.txt")
print(data.shape)
```

(97, 2)

In [7]:

```
x=data[['POPULATION']].values
y=data[['PROFIT']].values
plt.scatter(x,y,c='r',label='scatter_data')
plt.xlabel("POPULATION")
plt.ylabel("PROFIT")
plt.title('food_truck_profit_graph')
plt.grid(True,color='k')
plt.show()
```



In [11]:

```
k=LinearRegression()
k.fit(x,y)
```

Out[11]:

LinearRegression()

In [14]:

```
print('c value:',k.intercept_)
```

c value: [-3.89578088]

In [16]:

```
print('m values:',k.coef_)
```

```
m values: [[1.19303364]]
```

In [20]:

```
y_pred=k.predict(x)
plt.scatter(x,y,color='red')
plt.plot(x,y_pred,color='blue')
plt.title('salary us experience(Training set)')
plt.xlabel('years of experience')
plt.ylabel('salary')
plt.show()
```



In [24]:

```
from sklearn.metrics import r2_score
r_sq=r2_score(y,y_pred)
r_sq
```

Out[24]:

```
0.7020315537841397
```

In [26]:

```
from sklearn.metrics import mean_squared_error
rmse=mean_squared_error(y,y_pred)
rmse
```

Out[26]:

```
8.953942751950358
```

```
n1=4.5 n2=6.5 print('profit from 45000 people city is',k.predict([[n1]])*10000,'
')print('profit from 465000 people city is', k.predict([[n2]]) * 10000,')
```

In [32]:

```
n1=4.5  
n2=6.5  
print('profit from 45000 people city is',k.predict([[n1]])*10000,'$')  
print('profit from 65000 people city is',k.predict([[n2]])*10000,'$')
```

```
profit from 45000 people city is [[14728.70520541]] $  
profit from 65000 people city is [[38589.37808921]] $
```

In []: