In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sn
from sklearn import linear_model
```

In [4]:
```
df=pd.read_csv('hiring.csv')
```

In [5]:
```
df
```

Out[5]:

	experience	testscore	interviewscore	salary
0	NaN	8.0	9	50000
1	NaN	8.0	6	45000
2	five	6.0	7	60000
3	two	10.0	10	65000
4	seven	9.0	6	70000
5	three	7.0	10	62000
6	ten	NaN	7	72000
7	eleven	7.0	8	80000

In [7]:
```
df.testscore.median()
```

Out[7]:
```
8.0
```

In [8]:
```
df.testscore=df.testscore.fillna(df.testscore.median())
df.testscore
```

Out[8]:
```
0     8.0
1     8.0
2     6.0
3    10.0
4     9.0
5     7.0
6     8.0
7     7.0
Name: testscore, dtype: float64
```

In [9]:
```
df
```

Out[9]:

	experience	testscore	interviewscore	salary
0	NaN	8.0	9	50000
1	NaN	8.0	6	45000
2	five	6.0	7	60000
3	two	10.0	10	65000
4	seven	9.0	6	70000
5	three	7.0	10	62000
6	ten	8.0	7	72000
7	eleven	7.0	8	80000

In [10]:
```
df.experience= df.experience.fillna('zero')
```

In [11]:
```
df
```

Out[11]:

	experience	testscore	interviewscore	salary
0	zero	8.0	9	50000
1	zero	8.0	6	45000
2	five	6.0	7	60000
3	two	10.0	10	65000
4	seven	9.0	6	70000
5	three	7.0	10	62000
6	ten	8.0	7	72000
7	eleven	7.0	8	80000

In [13]:
```
!pip install word2number
from word2number import w2n
```
```
Collecting word2number
  Downloading word2number-1.1.zip (9.7 kB)
  Preparing metadata (setup.py): started
  Preparing metadata (setup.py): finished with status 'done'
Building wheels for collected packages: word2number
  Building wheel for word2number (setup.py): started
  Building wheel for word2number (setup.py): finished with status 'done'
  Created wheel for word2number: filename=word2number-1.1-py3-none-any.whl size=5589 sha256=9532f1d0122
391dde52d7d849a79ff5eabbaebeccb71abb9ecc7f9f713057ecc
  Stored in directory: c:\users\sai sushma iska\appdata\local\pip\cache\wheels\5b\79\fb\d25928e599c7e11
fe4e00d32048cd74933f34a74c633d2aea6
Successfully built word2number
Installing collected packages: word2number
Successfully installed word2number-1.1
```

In [15]:
```
def convert_word_to_number(word_number):
    try:
        return w2n.word_to_num(word_number)
    except ValueError:
        return None
df['experience'] = df['experience'].apply(convert_word_to_number)
```

In [16]:
```
df
```

Out[16]:

	experience	testscore	interviewscore	salary
0	0	8.0	9	50000
1	0	8.0	6	45000
2	5	6.0	7	60000
3	2	10.0	10	65000
4	7	9.0	6	70000
5	3	7.0	10	62000
6	10	8.0	7	72000
7	11	7.0	8	80000

In [17]:
```
df.isna().sum()
```

Out[17]:
```
experience        0
testscore         0
interviewscore    0
salary            0
dtype: int64
```

In [19]:
```
reg = linear_model.LinearRegression()
reg.fit(df.drop(columns=['salary']), df['salary'])
```

Out[19]:
```
LinearRegression()
```

In [20]:
```
reg.coef_
```

Out[20]:
```
array([2812.95487627, 1845.70596798, 2205.24017467])
```

In [21]:
```
reg.intercept_
```

Out[21]:
```
17737.26346433768
```

In [22]:
```
reg.predict([[2,9,6]])
```
```
C:\Users\Sai Sushma Iska\anaconda3\Lib\site-packages\sklearn\base.py:493: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(
```

Out[22]:
```
array([53205.96797671])
```

In [25]:
```
reg.predict([[12,10,10]])
```
```
C:\Users\Sai Sushma Iska\anaconda3\Lib\site-packages\sklearn\base.py:493: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(
```

Out[25]:
```
array([92002.18340611])
```

In [ ]: