In [19]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from sklearn import linear_model
```

In [20]:
```
data=[[np.nan,8,9,50000],[np.nan,8,6,45000],[5,6,7,60000],[2,10,10,65000],[7,9,6,70000],[3,7,10,62000],[10,np.nan,7,72000],[11,7,8,80000]]
```

In [21]:
```
df=pd.DataFrame(data,columns=['experience','test_score','interview_score','salary'])
```

In [22]:
```
df
```

Out[22]:

	experience	test_score	interview_score	salary
0	NaN	8.0	9	50000
1	NaN	8.0	6	45000
2	5.0	6.0	7	60000
3	2.0	10.0	10	65000
4	7.0	9.0	6	70000
5	3.0	7.0	10	62000
6	10.0	NaN	7	72000
7	11.0	7.0	8	80000

In [23]:
```
import math
median_experience = math.floor(df.experience.median())
median_experience
```

Out[23]:
```
6
```

In [24]:
```
median_test_score = math.floor(df.test_score.median())
median_test_score
```

Out[24]:
```
8
```

In [25]:
```
df.experience = df.experience.fillna(median_experience)
df
```

Out[25]:

	experience	test_score	interview_score	salary
0	6.0	8.0	9	50000
1	6.0	8.0	6	45000
2	5.0	6.0	7	60000
3	2.0	10.0	10	65000
4	7.0	9.0	6	70000
5	3.0	7.0	10	62000
6	10.0	NaN	7	72000
7	11.0	7.0	8	80000

In [26]:
```
df.test_score = df.test_score.fillna(median_test_score)
df
```

Out[26]:

	experience	test_score	interview_score	salary
0	6.0	8.0	9	50000
1	6.0	8.0	6	45000
2	5.0	6.0	7	60000
3	2.0	10.0	10	65000
4	7.0	9.0	6	70000
5	3.0	7.0	10	62000
6	10.0	8.0	7	72000
7	11.0	7.0	8	80000

In [27]:
```
reg  = linear_model.LinearRegression()
reg.fit(df[['experience','test_score','interview_score']],df.salary)
```

Out[27]:
```
LinearRegression()
```

In [28]:
```
reg.coef_
```

Out[28]:
```
array([2813.00813008, 1333.33333333, 2926.82926829])
```

In [29]:
```
reg.intercept_
```

Out[29]:
```
11869.91869918695
```

In [30]:
```
reg.predict([[2,9,6]])
```

Out[30]:
```
C:\Users\Lenovo\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(
array([47056.91056911])
```

In [31]:
```
2813.00813008*2+1333.33333333*9+2926.82926829*6+11869.91869918698
```

Out[31]:
```
47056.910569056985
```

In [32]:
```
reg.predict([[12,10,10]])
```

Out[32]:
```
C:\Users\Lenovo\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(
array([88227.64227642])
```

In [ ]:
```
```