

## Checking the values of Coefficients and Intercept based on different random\_state

In [12]:

```
import random as rd
reg = linear_model.LinearRegression()
i = rd.sample(range(50),10)
x,a,b = [],[],[]
for e in i:
    X_train, X_test, Y_train, Y_test = train_test_split(X,Y, test_size = 0.25,
                                                         random_state = e)

    reg.fit(X_train,Y_train)
    Y_pred = reg.predict(X_test)
    x.append(e)
    a.append(reg.coef_.round(decimals = 2))
    b.append(reg.intercept_.round(decimals = 2))
    rand_check = pd.DataFrame({
        'random_state': np.array(x).flatten(),
        'Coefficients': np.array(a).flatten(),
        'Intercept': np.array(b).flatten(),
    })
rand_check
```

Out[12]:

	random_state	Coefficients	Intercept
0	5	9337.14	27048.91
1	26	9532.38	26073.12
2	20	9621.99	25747.08
3	29	9452.90	26034.89
4	2	9518.15	23866.27
5	31	9554.99	25021.98
6	21	9349.63	24602.12
7	14	9778.56	24345.06
8	25	9307.12	27066.13
9	36	9487.41	25982.16