Implement Regression With AWS

In [42]:
```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
```

In [55]:
```
## Read the datav

df = pd.read_csv("https://nehagoudbaddam.s3.amazonaws.com/Data/loan-train.csv")
print('Size of Loan Approval data frame is :',df.shape)
df.head()
```

```
Size of Loan Approval data frame is : (614, 13)
```

Out[55]:

	Loan_ID	Gender	Married	Dependents	Education	Self_Employed	ApplicantIncome	Coapplica
0	LP001002	Male	No	0	Graduate	No	5849	
1	LP001003	Male	Yes	1	Graduate	No	4583	
2	LP001005	Male	Yes	0	Graduate	Yes	3000	
3	LP001006	Male	Yes	0	Not Graduate	No	2583	
4	LP001008	Male	No	0	Graduate	No	6000	

In [50]:
```
## Preprocess the data

df = df.dropna()
print("new shape:" ,df.shape)
```

```
new shape: (480, 13)
```

In [51]:
```
## Implement Logistic Regression Model on Loan data

X = df[["ApplicantIncome", "CoapplicantIncome", "LoanAmount", "Loan_Amount_Term",
y = df.Loan_Status


X_train,X_test,y_train,y_test = train_test_split(X,y,test_size=0.20, random_state


logreg = LogisticRegression()
logreg.fit(X_train,y_train)

y_pred = logreg.predict(X_test)

print("done")
```

```
done
```

In [52]:
```
## Evaluate the model

from sklearn.metrics import accuracy_score

score = accuracy_score(y_test,y_pred)
print('Accuracy :',score)
```

```
Accuracy : 0.8229166666666666
```

In [54]:
```
## Making predictions

Obs = pd.read_csv("https://nehagoudbaddam.s3.amazonaws.com/Data/loan-test.csv")

newData = Obs.values

y_pred = logreg.predict(newData)
y_pred
```

Out[54]:
```
array(['Y', 'Y', 'Y', 'Y', 'Y', 'Y', 'N', 'Y', 'Y', 'Y', 'Y'],
      dtype=object)
```

Task 1: Execute the code properly with given sample data

Task 2: Explain what you analyzed in the code. Make a detailed report.

Task 3: Use any other dataset to run the tasks above again.

Task 4: Perform any other machine learning code with putting data in AWS S3.

In [ ]: