```
import pandas as pd
from sklearn.linear_model import LogisticRegression
import numpy as np
```

insu=pd.read\_csv('/content/task ins.csv')

## insu.head()

<b>₹</b>		id	Gender	Age	Driving_License	Region_Code	Previously_Insured	Vehicle_Age	Vehicle_Damage	Annual_Premium	Policy_Sales_Chanr
	0	381110	Male	25	1	11	1	< 1 Year	No	35786	1
	1	381111	Male	40	1	28	0	1-2 Year	Yes	33762	
	2	381112	Male	47	1	28	0	1-2 Year	Yes	40050	1
	3	381113	Male	24	1	27	1	< 1 Year	Yes	37356	1
	4	381114	Male	27	1	28	1	< 1 Year	No	59097	1

insu.isnull().sum()



Vintage

insu.info()

11130.11110()

dtvne: int64

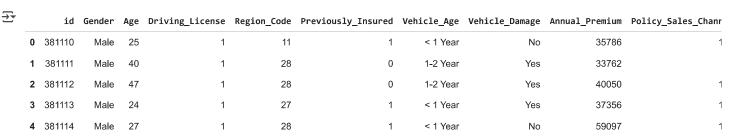
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 127037 entries, 0 to 127036
Data columns (total 11 columns):

0

Data	corumns (cocar ii cori						
#	Column	Non-Null Count	Dtype				
0	id	127037 non-null	int64				
1	Gender	127037 non-null	object				
2	Age	127037 non-null	int64				
3	Driving_License	127037 non-null	int64				
4	Region_Code	127037 non-null	int64				
5	Previously_Insured	127037 non-null	int64				
6	Vehicle_Age	127037 non-null	object				
7	Vehicle_Damage	127037 non-null	object				
8	Annual_Premium	127037 non-null	int64				
9	Policy_Sales_Channel	127037 non-null	int64				
10	Vintage	127037 non-null	int64				
dtypes: int64(8), object(3)							

from sklearn.preprocessing import LabelEncoder
le=LabelEncoder()
insu['Gen']=le.fit\_transform(insu['Gender'])
insu.head()

memory usage: 10.7+ MB



le1=LabelEncoder()
insu['Veh\_age']=le.fit\_transform(insu['Vehicle\_Age'])
insu.head()

₹		id	Gender	Age	Driving_License	Region_Code	Previously_Insured	Vehicle_Age	Vehicle_Damage	Annual_Premium	Policy_Sales_Chanr
	0	381110	Male	25	1	11	1	< 1 Year	No	35786	1
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	4	381114	Male	27	1	28	1	< 1 Year	No	59097	1

log=LogisticRegression()

a=insu[['id','Driving\_License','Veh\_age','Annual\_Premium']]
b=insu['Vehicle\_Damage']
log.fit(a,b)



LogisticRegression (1) ??
LogisticRegression()

id=int(input("Enter your id:"))
Driving\_License=int(input("Enter your Driving\_License:"))
Veh\_age=int(input("Enter your Veh\_age:"))
Annual\_Premium=int(input("Enter your Annual\_Premium:"))
predict=log.predict([[id,Driving\_License,Veh\_age,Annual\_Premium]])
print(predict)

<del>\_</del>\_

Enter your id:12

Enter your Driving\_License:5643

Enter your Veh\_age:7

Enter your Annual\_Premium:2009

['No']

/usr/local/lib/python3.11/dist-packages/sklearn/utils/validation.py:2739: UserWarning: X does not have valid feature names, but Logistic warnings.warn(

log.score(a,b)

→ 0.6439383801569621

from sklearn.metrics import accuracy\_score
preval=log.predict(a)
accuracy\_score(b,preval)

0.6439383801569621