**Code 1 A (Multiple)**

import warnings

warnings.filterwarnings('ignore')

#import the numpy and pandas package

import numpy as np

import pandas as pd

#data visualisation

import matplotlib.pyplot as plt

import seaborn as sns

path="/content/Advertising.csv"

df=pd.read\_csv(path)

df.head()

df

df.shape

df.info()

df.describe()

sns.pairplot(df,x\_vars=['TV'],y\_vars='Sales',height=4,aspect=1,kind='scatter')

plt.show()

x=df[['TV','Radio','Newspaper']]

y=df['Sales']

x.head()

from sklearn.model\_selection import train\_test\_split

x\_train,x\_test,y\_train,y\_test=train\_test\_split(x,y,train\_size = 0.7,test\_size=0.3,random\_state=100)

x\_train

x\_test

y\_test

y\_train

x.tail()

import seaborn as sns

sns.pairplot(df,x\_vars=['TV','Newspaper','Radio'],y\_vars='Sales',height=4,aspect=1,kind='scatter')

from sklearn.model\_selection import train\_test\_split

x\_train,x\_test,y\_train,y\_test=train\_test\_split(x,y,train\_size = 0.7,test\_size=0.3,random\_state=100)

x\_train.head()

y\_train.head()

from sklearn.linear\_model import LinearRegression

regression=LinearRegression()

regression.fit(x\_train,y\_train)

reg\_prediction=regression.predict(x\_test)

reg\_prediction

import seaborn as sns

sns.displot(reg\_prediction-y\_test)

sns.displot(reg\_prediction-y\_test,kind='kde')