REGRESSION

from cgi import test

from turtle import color

import matplotlib.pyplot as plt

import numpy as np

from sklearn import datasets,linear\_model

from sklearn.metrics import mean\_squared\_error,r2\_score

df=datasets.load\_diabetes()

df=['feature\_name']

diabetes\_X,diabetes\_y=datasets.load\_diabetes(return\_X\_y=True)

diabetes\_X.shape

diabetes\_y.shape

diabetes\_X=diabetes\_X[:,np.newaxis,2]

diabetes\_X.shape

diabetes\_X\_train=diabetes\_X[:-20]

diabetes\_X\_test=diabetes\_X[-20:]

diabetes\_y\_train=diabetes\_y[:-20]

diabetes\_y\_test=diabetes\_y[-20:]

regr=linear\_model.LinearRegression()

regr.fit(diabetes\_X\_train,diabetes\_y\_train)

diabetes\_y\_pred=regr.predict(diabetes\_X\_test)

print("Coefficent:\n",regr.coef\_)

print("Mean square error:%2f"%mean\_squared\_error(diabetes\_y\_test,diabetes\_y\_pred))

print("Coefficent of determination:%2f"%r2\_score(diabetes\_y\_test,diabetes\_y\_pred))

plt.scatter(diabetes\_X\_test,diabetes\_y\_test,color="black")

plt.plot(diabetes\_X\_test,diabetes\_y\_pred,color="blue",linewidth=3)

plt.xlabel("age")

plt.ylabel("diabetes progression")

plt.xticks(())

plt.yticks(())

plt.show()

o/p



