**25.How to plot 3D bar charts using matplotlib in python?**

**Objective:**

* To plot 3D bar charts regarding given data sample using python.

**Process:**

* Import necessary libraries.
* Import styles library.
* Load the data sample.
* Use bar3D() to plot 3D bar chart.

**Input:**

* Data set(sample).

**Output:**

* 3D bar chart for sample data set.

**Source code:**

from mpl\_toolkits.mplot3d import axes3d

import matplotlib.pyplot as plt

import numpy as np

from matplotlib import style

style.use('ggplot')

#sample data set

data={'salary':[100,200,300,400,500,400,300,200,100,50], 'age':[25,26,25,23,30,29,23,23,25,25],

'rating':[4,3.24,2.5,2.25,2,2.25,2.5,2.75,3.2,4.2], 'bonus':[2500,1200,900,3000,1800,1400,850,250,

750,1000]}

#create data frame

df=pd.DataFrame(data)

fig = plt.figure()

#figure object initialization

ax1 = fig.add\_subplot(111, projection='3d')

#arguments

x3 = (df['salary'])

y3 = (df['age'])

z3 = (df['rating'])

#arguments

dx = np.ones(10)

dy = np.ones(10)

dz = (df['bonus'])

#bar chart object and arguments

ax1.bar3d(x3, y3, z3, dx, dy, dz)

#set axis lables

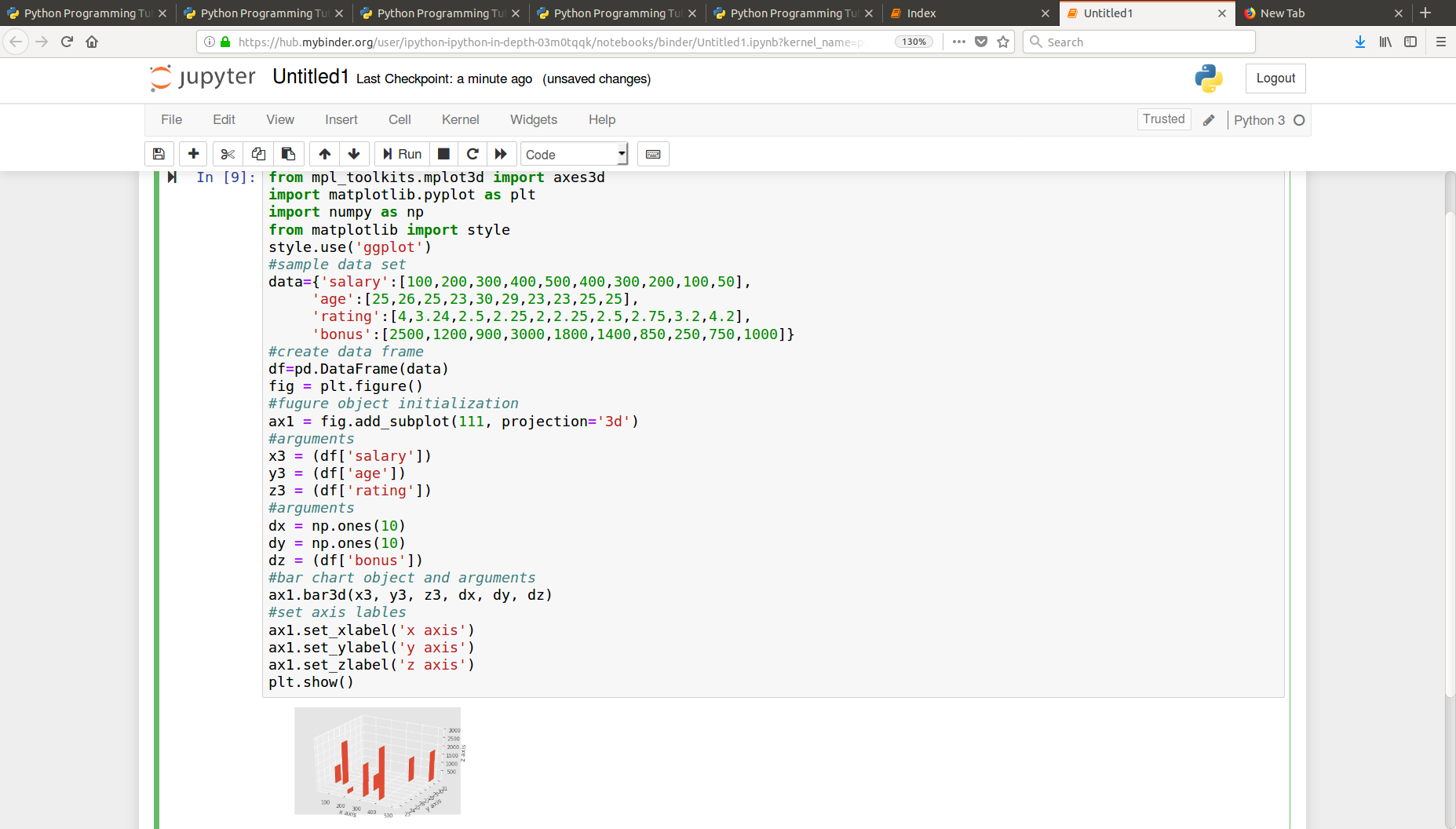
ax1.set\_xlabel('x axis')

ax1.set\_ylabel('y axis')

ax1.set\_zlabel('z axis')

plt.show()

**Screen shot:**

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