

**Note:**

1. Copied tasks will be awarded **zero** marks without any investigation.
2. Comments your code properly.
3. Note that these tasks marks could be graded through a viva in the lab.
4. Please submit your file in this format (roll-no-name) i.e (22P-9111-Saad.c)

Q1) You are given a CSV file named "sales\_data.csv" containing sales data, you task is to do the following:

1. Load the data into a Pandas DataFrame.
2. Calculate the total sales for each product.
3. Calculate the average quantity sold in the year 2003, 2004 and 2005, make a bar chat to display the quantity of products yearwise yearwise.
4. Plot a scatter chart showing the trend of the average quantity sold per year.

Q2) You are given a dataset named CTIdataset, you have to do the following:

1. Load all the xml files and show their root tag
2. Extract the data from xml files and remove none values from it
3. Store the data of "category" and "values" tag in a list
4. Now store this list in a newly created csv file named "CTI\_cat\_val\_dataset"

Q3) You have the newly created dataset named CTI\_cat\_val\_dataset, do the following:

1. Display the data as shown in the fig

	Category	Value
0	Other	Fritz_HOW-CHINA-WILL-USE-CYBER-WARFARE(Oct-01-...
1	Network activity	politics.slashdot.org
2	External analysis	China-Military-Power-final.pdf
3	Network activity	archive.newsmax.com
4	Network activity	www.sfgate.com
...	...	...
4995	Network activity	win.foxit-pro.com
4996	Network activity	update.ymail-vip.com
4997	Other	C5_APT_SKHack.pdf
4998	Payload installation	bce1069dd099f15170c5fd05bae921b5
4999	Payload installation	b4ede406247870e155079124e88d458cedc43d8d
5000 rows × 2 columns		

2. Display the data as shown in fig

