# Practical Assignment 4 - Part 1

## Q-1

**Create database in sqlite** named "Industry.db". Create a table Department (d_id, d_name, no_of_employee, total_payment) table and Insert minimum 10 records.
**Write a python program** to access records from Department table and insert data into "dept.CSV" file with new column 'average_payment' calculating from 'total_payment' and 'no_of_employee'. (average_payment = total_payment / no_of_employee)

**Plot a scatter chart** for department vs no_of_employee and department vs total_payment.

[*note: Take following values for d_name – like Sales, Marketing, Finance, Account, IT, Manufacturing, Testing, Purchase, Stock_Management, Production etc. ]

## Q-2

**Write a python program** to create database named "College.db" in sqlite. Create table Teacher(t_id, t_name, salary, working_hours). Insert minimum 10 records.
Access Teacher table data and diplay data in descending order of salary.
Display name and working hours of teacher whose salary is highest.
Display name of teachers whose salary is between 45000 to 65000.
Display **subplot bar chart** t_id vs working_hours and **subplot line chart** t_id vs salary using subplot concept.

## Q-3

**Create database in sqlite** named "Bank.db". Also create Bank_account (account_no, account_type(saving/current), balance) table and Insert minimum 10 records.
**Write a python program** which will maintain minimum 500 balance in account when withdraw some amount by specific user.
Also access records from Bank_account table whose balance is more than 99,999 and insert these data into 'Lakhpati.CSV' file.

**Plot a scatter chart** for account_no vs balance.

## Q-4

**Create one CSV file** named "employee.csv". Take minimum 10 records in this CSV file according to following EMP table.
**Write a python program** to import CSV file data into table EMP

(e_id, e_name, salary, date_of_birth).

**Plot a histogram chart** for measure frequency of employees according to range of ages (30 to 45, 46 to 60, 61 to 75).

## Q-5

**Write a python program** to create database named "company.db" in sqlite. Also create table sales_product (order_no (primary key), p_id, p_name, p_unit_price, sales_quantity, sales_unit_price). **Take values from user** and insert minimum 5 records.
Access sales_product table data and display all data with 'total_sales_price' and 'total_profit'.

(total_sales_price = sales_quantity * sales_unit_price).

(total_unit_price = p_unit_price * sales_quantity)

(total_profit = total_sales_price – total_unit_price)

**Plot a scatter** which will show total_unit_price, total_sales_price and total_profit on single plot.

## Q-6

Write a phython script to do following on student (Rollno, Name, Sub 1, Sub 2, Sub 3, total) table : **40**

1. Insert atleast 5 to 10 records.
2. Update the specific record value.
3. Delete the record specific record.
4. Display student detail who got highest total marks.

## Q-7

Write Python Script to do followings onitem.csv (Item_no, Item_name, Price, Qty, total) **40**

1. Write item's detail in the item.csv file.
   Calculate total = price * Qty
2. Using data frame display item name and price whose price is between 1000 to 5000.
3. Display alternate records from item.csv file.
4. Display items whose price is minimum, maximum.
5. Sort the data according to itemname wise.
6. Display items rows between 3th to 7th row.
7. Display last 6 rows.

## Q-8

Sales (sid, year, totalsales) **40**

Create above table into a SQLite database with appropriate constraints.

A. Insert at least 5-10 records into the sales table.

B. Export sales table data into sales.csv file.

C. Write a python scripts that read the sales.csv file and plot a bar chart that shows totalsales of the year. Also decorate the chart with appropriate title, lables, colours etc.

## Q-9

Create CSV File for Product Selling for 6 Months and add at-least 5 Records for 5 different products. **40**

| Prod_Name | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|

Create Python script to perform following task.

A. Read data in Dataframe.

B. Add columns and calculate total_sell, average_sell.

C. Plot Total sell and average sell together on line chart with proper Legends, titles and lables.

D. Explain final dataframe to csv named sell_analysis.csv

## Q-10

Create a 'student' database with (sid, sname, city, age must > 6). Insert 7 records. Create user defined function disp_Stud (con, query). It contains two passing parameters: Connection and the Query. Find all the details of students whose name's second and last letter is 'a'. Ex. Rama, Radha, Mahira... and display records in table format. **[40]**

## Q-11

Create COLLEGE database and perform following tasks. **[40]**

- Create following table using SQLite and then close the connection. Student(roll_no INTEGER Primary key, name text(20), city text(20), age INTEGER)
- Insert ten student records for Student table.
- Display all records of the Student table using cursor.
- Export the Student table to CSV file.

## Q-12

Write a python program to implement CREATE, INSERT and SELECT operation on Employee database using sqlite3 library. **[40]**

- Use Empdetail (empno, name, city, designation, salary, dateofjoin) table.
- Insert at-least 10 records
- Display all records of the Employee table using cursor.
- Export the Employee table to CSV file

## Q-13

Write a python code to write the data frame in the csv file. Name csv file as "studentinfo.csv". and also create pychart for the same. **[40]**

## Q-14

Write a Python Script to do fallowings on student (Rollno, Name,Subl,Sub2, Sub3,Total) table: **[40]**

1. Insert at least 5 to 10 records.
2. Update the Specific record value.
3. Delete the record Specific record.
4. Display student detail who got highest total marks.