1. Create Student Table with appropriate constraints.
    STUDENT(sno number primary key, sname text(20), age number, total_marks number)

    write python programs to perform following task:
    1) store the table data into a dataframe and display the dataframe.
    2) List out top three records from the dataframe
    3) Display all records from dataframe whose age is not less than 18.
    4) Display age of student whose sno is 5. (use loc() and iloc() function)

2. Create following table and store any five records:
    Employee(eno number primary key, Ename text(20),designation text(10),basic number , da number, gross_salary number)

    write python programs to perform following tasks:
    1) Store the table data into dataframe and display the dataframe.
    2) Sort the dataframe based used on gross salary and List out bottom two record from the dataframe.
    3) Display all records from dataframe whose gross Display gross salary is more than 25000 .
    4) Display gross salary of employee whose eno is 4.

3. Create CSV file for product selling for 6 months and add only 5 record for 5 different product.

Prod_name	JAN	FEB	MAR	APR	MAY	JUN

    Create Python script for following program:
    1) Read data into DataFrame
    2) Add columns and calculate total_sell, average_sell
    3) Plot Total sell and average sell together on Line chart with proper legends, Titles and Lables.
    4) Save the DataFrame to CSV named 'sell_analysis.csv'

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

    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

5. Write Python Script to do followings on item.csv (Item_no, Item_name, Price, Qty, total)
    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 item name wise.
    6) Display items rows between 3th to 7th row.
    7) Display last 6 rows.

6. Sales (sid, year, totalsales)
   Create above table into a SQLite database with appropriate constraints.
   1) Insert at least 5-10 records into the sales table
   2) Export sales table data into sales.csv file.
   3) 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.

7. Create following table with appropriate constraints in Collage Database:
   Employee (E_ID, Name, Dob, Designation, Salary)
   a) Dump Employee table structure and data in Emp.csv file.
   b) Dump whole Database named College in Emp1.csv file.

8. Create following table with appropriate Constraints:
   Product (prod_id , prod_name , price, qty,total_amount)
   1) Import Product.csv file data into Product table.
   2) Export Product table data into prod.csv file.

9. Employee(Eno number ,Ename text ,Desg text ,Salary number ,City text ,Email text)

   Write a SQL trigger named emp_trigger that is designed to execute before inserting records into the emp table. The trigger should perform the following action:

   1) Check if the 'email' field in the newly inserted record follows a specific email address pattern. (example : abc@gmail.com)

Note:
- Lab journals are to be submitted in journal files only.
- Index with proper page number is mandatory.
- Journal submission date will be declared during lectures.

Prof. Jaimini Patel