Practical Assignment-1

Q-1 Open SQLite using command prompt and do the following task.

➔Create database of your name in SQLite (like ram.db)

➔In this database create one table with different types of columns like table T1 given below.
T1(c1,c2 NULL,c3 int,c4 numeric,c5 float,c6 varchar(20),c7 BLOB,c8 date,c9 boolean,c10 mytype)

➔Insert different types of data in every column (to check SQLite is manifest type system).
You can take following type of values for every column:
3, 4.5, '5', '6.7', "8", "9.5", 'abc', "ABC", x'000110', x'AB26', null, date('now'), true, false

➔Display table data and type of all data in box mode. (to check storage class of data according to affinity type of column)

[*note : Use .databases, .open, .tables, .mode and .quit commands, typeof() function]

Q-2 Using begin…Commit and begin…rollback do following transactions:

1) transfer 1000 rs from one account to another.
2) Temporary increase balance 10% just to check result of balance.

Q-3 Create **STUDENT(rno, year, name)** table and **RESULT(rno, year, percentage)** table. Insert **Composite Primary key (rno,year)** on STUDENT table and Insert **Composite Foreign key (rno,year)** on RESULT table. Write SQL query to do following task.

1) Insert minimum 5 records in both table (take roll no 1 to 5)
2) **Add new column** 'mobnum' in STUDENT table
3) **Rename column** 'mobnum' to 'mobile'
4) Insert mobile number 9876543210 whose roll no is 1
5) **Drop column** 'mobile' from STUDENT table
6) Delete any one record from STUDENT table whose reference is taken in RESULT table (without using ON DELETE CASCADE)
7) Change roll no of any one student in STUDENT table whose reference is taken in RESULT table (without using ON UPDATE CASCADE)

[*Note : use PRAGMA foreign_keys, table level composite primary key and composite foreign key, alter table query]

Q-4 Create **STUDENT(rno, name)** table and **RESULT(rno, percentage)** table with primary key and foreign key. **Foreign key must be created with ON DELETE CASCADE and ON UPDATE CASCADE.** Write SQL query to do following task.

1) Insert minimum 5 records in both table (take roll no 1 to 5)
2) Delete any one record from STUDENT table whose reference is taken in RESULT table **(using ON DELETE CASCADE)**
3) Change roll no of any one student in STUDENT table whose reference is taken in RESULT table **(using ON UPDATE CASCADE)**

Q-5 Give examples (Write query and output) for following Filtering elements:
Distinct, where, between, in, like, union, intersect, except, limit, IS NULL, IS NOT NULL,
Group by, order by, conditional logic (CASE)
[*Note: Take tables and data as per your requirement]

Q-6 Create two tables and insert some data to perform following joins :
Inner join, Natural join, Left join, Right join, Full outer join, cross join, self join

Practical Assignment-2

Q-1 Create triggers which will not allow insert, update and delete operations on following table : RESULT(rno, name, rank)

Q-2 create trigger for EMP(eno, name, salary) table which will not allow to update salary in march month.

Q-3 create triggers which will maintain log table ELOG(eno, operation, date_and_time) for insert, update and delete operations perform on EMP(eno, name, salary) table.

Q-4 create trigger for ACCOUNT(ano, balance) table to give error message if withdraw amount is more than account balance.

Q-5 Dump STUDENT table data into one text file

Q-6 Dump STUDENT table structure into one word file.

Q-7 Dump entire database into one sql file.

Q-8 Export EMP(eno,name,salary) table data in one CSV file.

Q-9 Import data from one CSV file to STUDENT(rno, s1, s2, s3) table.

Q-10 Create one module calc.py with 4 functions add(n1,n2),sub(n1,n2),div(n1,n2),mul(n1,n2) in it. Import this module in python and call these functions with some values.

Q-11 Create one package ‘mypackage’ in python which have two modules with following functions :

student.py ➔ dispName(nam), dispRollNo(rno)
professor.py ➔ dispName(nam), dispEmpNo(eno)

import package and call all functions of specific module.

Q-12 Access any one database of sqlite3 in python. Apply create, insert, update, delete and select query from python.
Must have to use following all methods for it : connect(), execute(), fetchone(), fetchall(), commit().