Database Systems
Spring Semester 2023
Assignment #2

Due Date: 22ⁿᵈ February 2023,

Instructions:
- *Submit on* GOOGLE CLASSROOM *in the form of a zip file with your ROLLNUMBER*
- *Do not copy the work of your peers. In case cheating is detected, then your case will be referred to DC.*

Question: Event DB

Science-X company organized scientific seminars, workshops, and conferences in different cities worldwide. We have developed an Event database to keep track of the different events organized by Science-X. The database stores details about the events, sponsors, and participants. For each event, we record the event ID, name, location (city name), type(seminar, workshop, conferences), start date\time, and end date\time. An event can be sponsored by different organizations. We also record basic information about each participant and the organization they belong to, if any. The attribute OID in person is a foreign key and can be null.

Consider the following relations for the above Event database:

Event (EID, Ename, location, type, start_date, start_time, end_date, end_time)
Organization (OID, Oname, address)
Participants **(PID, Pname, bdate, gender, OID)**
Sponsors (EID, OID, amount)
Attended (PID, EID)

1. **Write appropriate SQL DDL statements for declaring the above relational schema. Specify the appropriate keys and referential integrity constraints and actions.**
2. **Insert 5 or more tuples in each of the above tables.**

3. **Write down SQL statements for the following queries:**
    1. List the ids and names of all the Events.
    2. List the event id, name, and start_time of all the events that took place on January 3, 2023.
    3. List the name of female participants younger than 25 who do not belong to any organization.
    4. Find the names of the organizations that have sponsored one or more events.
    5. Display the ids of the participants who attended the event organized by "Techlogix" on January 25, 2003.
    6. List the names of organizations that have never sponsored a seminar; note seminar is a type of event.
    7. List the ids of participants who attended exactly five events.
    8. List the number of events attended by each participant.

9. Find the maximum, minimum, and average sponsorship amount.
10. List the name of the organization that has organized a seminar and a workshop in December 2022.
11. List the names of the participants who have attended a seminar but never attended a conference.
12. List the ids of participants who have attended an event on 5-Jan-2023 or who have never attended any event.