CS6.302 - Software System Development
Lab - 2 :: SQL - Stored Procedures and Cursors :: Marks: 20
Lab Activity :: Due: 15 Aug 2025, 5:00 PM

Instructions:
- This is an individual activity. Please follow the questions properly and answer them
- We expect one submission from one student. Please follow submission guidelines mentioned below. If you don't follow the submission guidelines, you will receive '0'
- Please use mySQL workbench for your practice and submission.
- There are five questions, each question carries 4 Marks.

Q: Please use below table creation, insertion statement to load data into your local machine. Feel free to load as many tuples as possible for your convenience to achieve the results. Later answer the questions below:

```
-- Create Tables
CREATE TABLE Shows (
    ShowID INT PRIMARY KEY,
    Title VARCHAR(100),
    Genre VARCHAR(50),
    ReleaseYear INT
);

CREATE TABLE Subscribers (
    SubscriberID INT PRIMARY KEY,
    SubscriberName VARCHAR(100),
    SubscriptionDate DATE
);

CREATE TABLE WatchHistory (
    HistoryID INT PRIMARY KEY,
    ShowID INT,
    SubscriberID INT,
    WatchTime INT, -- Duration in minutes
    FOREIGN KEY (ShowID) REFERENCES Shows(ShowID),
    FOREIGN KEY (SubscriberID) REFERENCES
Subscribers(SubscriberID)
);

-- Insert Sample Data
INSERT INTO Shows (ShowID, Title, Genre, ReleaseYear) VALUES
(1, 'Stranger Things', 'Sci-Fi', 2016),
(2, 'The Crown', 'Drama', 2016),
(3, 'The Witcher', 'Fantasy', 2019);
```

```
INSERT INTO Subscribers (SubscriberID, SubscriberName,
SubscriptionDate) VALUES
(1, 'Emily Clark', '2023-01-10'),
(2, 'Chris Adams', '2023-02-15'),
(3, 'Jordan Smith', '2023-03-05');

INSERT INTO WatchHistory (HistoryID, SubscriberID, ShowID,
WatchTime) VALUES
(1, 1, 1, 100),
(2, 1, 2, 10),
(3, 2, 1, 20),
(4, 2, 2, 40),
(5, 2, 3, 10),
(6, 3, 2, 10),
(7, 3, 1, 10);
```

Answer the following questions. Each question carries 4 marks.

1. ListAllSubscribers() – Stored procedure that uses a cursor to iterate through all `Subscribers` and prints their names.
2. Write a procedure GetWatchHistoryBySubscriber(IN sub_id INT) that returns all shows watched by the subscriber along with watch time.
3. AddSubscriberIfNotExists(IN subName VARCHAR(100)) – Adds a new subscriber into the `Subscribers` table, checking if the subscriber name already exists.
4. Make a procedure SendWatchTimeReport() which internally calls GetWatchHistoryBySubscriber() for all subscribers, but **only if** they have watched something.
5. Write a procedure with a cursor that loops through each subscriber and for each subscriber GetWatchHistoryBySubscriber() to print their watch history.

Submission criteria:

- Place your answer scripts under <rollnumber>_lab2.ZIP with files as q1.sql, q2.sql, q3.sql, q4.sql, q5.sql and README.TXT. Submit this ZIP in Moodle
- README.TXT should contain the steps to execute the scripts and a git repository link. If you miss the git repo link, you will receive '0'