CHRIST (Deemed to be University)
Department of Computer Science
Master of Artificial Intelligence and Machine Learning

Course: MAI271 – JAVA Programming
Exercise No: LAB Exercise – 8
Date: 13 – 01 – 2024
Duration: 2 Hrs

Question (10 Marks)

You are tasked with developing a Java application using JDBC to manage attendee information for the international conference organized by CHRIST (Deemed to be University). The conference organizers require the following functionalities:

1. Add Attendee:
- When a new attendee registers for the conference, the system should allow the entry of their details, including Full Name, Email, Contact Number, and Country.
- The system should automatically generate a unique ID for each attendee using `PreparedStatement`.

2. Edit Attendee:
- Organizers should be able to update the attendee's information, such as their email or contact number, utilizing `PreparedStatement` for the database interactions.

3. Delete Attendee:
- In case an attendee cancels their registration, the system should provide the functionality to delete their information from the database using `PreparedStatement`.

4. Search Attendee:
- There should be an option to search for attendees based on their ID, Full Name, or Country, with the use of `PreparedStatement`.

5. Generate Attendee Statistics:
- The conference organizers want to generate statistics on the number of attendees from each country. They need a callable procedure that, when invoked, returns a result set containing the count of attendees from each country.
- Implement this functionality using `CallableStatement` to call a stored procedure in the database that calculates and returns the desired statistics.

Your tasks are as follows:
- Implement the Java application using JDBC, `PreparedStatement`, and `CallableStatement` to interact with the database.
- Ensure that the attendee ID is automatically generated and unique for each attendee using `PreparedStatement`.

- Develop the functionalities for adding, editing, deleting, and searching for attendees using both `PreparedStatement` and `CallableStatement`.
- Implement the generation of attendee statistics using a stored procedure invoked through `CallableStatement`.

Evaluation Rubrics:

Add and Edit Operation:3 Marks

Search and Delete Operation:3 Marks

Implementation of CallableStatement:4 Marks

Total:10 Marks

General Instruction:

1. Ensure that your code includes relevant comments to enhance readability and understanding. Subsequently, upload your code to GitHub for version control and collaborative access.
2. Include descriptive comments within the code, explaining its functionality and logic.
3. In the Google Classroom submission, include the GitHub URL where your code is hosted.
4. Attach a PDF document named "your_register_number_exercise_No.pdf" to the submission.The PDF document should include screenshots of the code and the output screen.
5. Upload the answer document&GitHub URL in Google Classroom on or before the deadline mentioned.Evaluation will not be considered for late submission