**Case Study: Clinical Trial Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a clinical trial management system for a pharmaceutical company, allowing users to manage trials, participants, and data.

**Functionalities:**

1. **Trial Management:**
   * Add new clinical trials
   * View trial details
   * Update trial information
   * Delete trials
2. **Participant Management:**
   * Register new participants for trials
   * View participant details
   * Update participant information
   * Delete participants
3. **Data Management:**
   * Record trial data for participants
   * View data details
   * Update data information
   * Delete data records

**Database Schema:**

* **Trial Table:**
  + trial\_id (Primary Key)
  + trial\_name
  + start\_date
  + end\_date
  + status (Planned, In Progress, Completed)
* **Participant Table:**
  + participant\_id (Primary Key)
  + participant\_name
  + date\_of\_birth
  + contact\_number
  + email
  + trial\_id (Foreign Key references Trial Table)
* **Data Table:**
  + data\_id (Primary Key)
  + participant\_id (Foreign Key references Participant Table)
  + data\_date
  + data\_value
  + data\_type

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing trials, participants, and data records.
* Ensure the application allows for recording data, updating data records, and managing trial participants efficiently.
* Handle exceptions effectively and provide user-friendly error messages.
* Ensure the application code is clean, well-documented, and follows standard coding conventions.

**Submission:**

* Submit the complete source code along with a README file that provides setup and usage instructions.
* Share your project by uploading it to a public GitHub repository.
* Provide the link to the GitHub repository to the coaches.