

PROJECT SYNOPSIS

College Event Management System

Guided By-

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Introduction

The College Event Management System is a console based software application developed using **Java**, **MySQL**, and **JDBC connectivity**. The system is designed to automate the traditional process of managing college events, registrations, and venue allocation.

In many colleges, event coordination is conducted manually, resulting in challenges such as loose records, delayed communication, limited accessibility, and inefficient planning. This system resolves these issues by offering a structured, role-based digital platform.

The system provides three types of access: **Admin, Organizer, and Student**. Admin manages events and venues, organizers coordinate event details, and students can register and view upcoming events. The system maintains all data in a secure relational database.

Objectives

The main objectives of this system include:

- Digitizing event registration and management processes.
- Providing structured, role-based access to maintain authorization and security.
- Ensuring clear venue allocation and preventing scheduling conflicts.
- Allowing students to view and register for upcoming events online.
- Maintaining complete event records including registrations, organizers, and feedback.

Project Category

Application Development (Database + Console based Java Application)

ANALYSIS

Modules and Description

The project is architected into 4 core functional modules:

Module 1: User & Authentication Management

(Admin / Organizer / Student)

- 1.1 User Registration: Students can create an account through the system.
- 1.2 Role Assignment: Role stored in User Account table (Student / Admin / Organizer).
- 1.3 Login Authentication: Secure login using stored username and password.
- 1.4 Profile Loading: Retrieves associated details from Student/Organizer tables.

Module 2: Event Management (Admin + Organizer)

- 2.1 Event Creation: New events added with venue, schedule, organizer, and seat capacity.
- 2.2 Event Update: Modify seat availability, time, venue, or event details.
- 2.3 Event Listing: System displays all scheduled events.
- 2.4 Event Details Lookup: Retrieve complete event information by ID.
- 2.5 Event Deletion (Future Scope): Archive or remove outdated events.

Module 3: Venue & Resource Management (Admin)

- 3.1 Venue Addition: Add event halls, classrooms, seminar rooms, etc.
 - 3.2 Venue Update: Modify seating capacity or name when required.
 - 3.3 Venue Listing: Display venue inventory along with availability.
 - 3.4 Venue Allocation Validation (Future Scope): Avoid duplicate bookings.
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Module 4: Participant & Registration Management

(Student)

- 4.1 Student Event Registration: Registered students can enrol in events.
- 4.2 Duplicate Restriction: One student cannot register twice for the same event.
- 4.3 Registration History: Displays all successfully registered events.

- **4.4 Feedback System (Future Scope):**
- Students rate and comment on attended events.

DATABASE DESIGN:

The system uses a relational database with 8 interconnected tables:

1: User Account

```
mysql> desc useraccount;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| user_id | int | NO | PRI | NULL | auto_increment |
| username | varchar(50) | NO | UNI | NULL | |
| password_hash | varchar(255) | NO | | NULL | |
| role | enum('student','organizer','admin') | NO | | student | |
| created_at | timestamp | YES | | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
```

2: Student:

```
mysql> desc student;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| student_id | int | NO | PRI | NULL | auto_increment |
| user_id | int | NO | MUL | NULL | |
| name | varchar(100) | NO | | NULL | |
| email | varchar(100) | YES | UNI | NULL | |
| department | varchar(50) | YES | | NULL | |
| year | int | YES | | NULL | |
+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)
```

3: Organizer:

```
mysql> desc organizer;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| organizer_id | int | NO | PRI | NULL | auto_increment |
| user_id | int | YES | MUL | NULL | |
| org_name | varchar(100) | YES | | NULL | |
| contact_number | varchar(20) | YES | | NULL | |
| email | varchar(100) | YES | | NULL | |
+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
```

4: Venue:

```
mysql> desc venue;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| venue_id | int | NO | PRI | NULL | auto_increment |
| name | varchar(100) | NO | | NULL |
| location | varchar(255) | YES | | NULL |
| capacity | int | YES | | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

5: Event:

```
mysql> desc event;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| event_id | int | NO | PRI | NULL | auto_increment |
| title | varchar(150) | NO | | NULL |
| description | text | YES | | NULL |
| organizer_id | int | YES | MUL | NULL |
| venue_id | int | YES | MUL | NULL |
| event_date | date | YES | | NULL |
| start_time | time | YES | | NULL |
| end_time | time | YES | | NULL |
| seats_available | int | YES | | NULL |
+-----+-----+-----+-----+-----+
9 rows in set (0.02 sec)
```

6: Registration:

```
mysql> desc registration;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| registration_id | int | NO | PRI | NULL | auto_increment |
| event_id | int | NO | MUL | NULL |
| student_id | int | NO | MUL | NULL |
| registered_at | timestamp | YES | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
| status | enum('registered','cancelled') | YES | registered |
+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
```

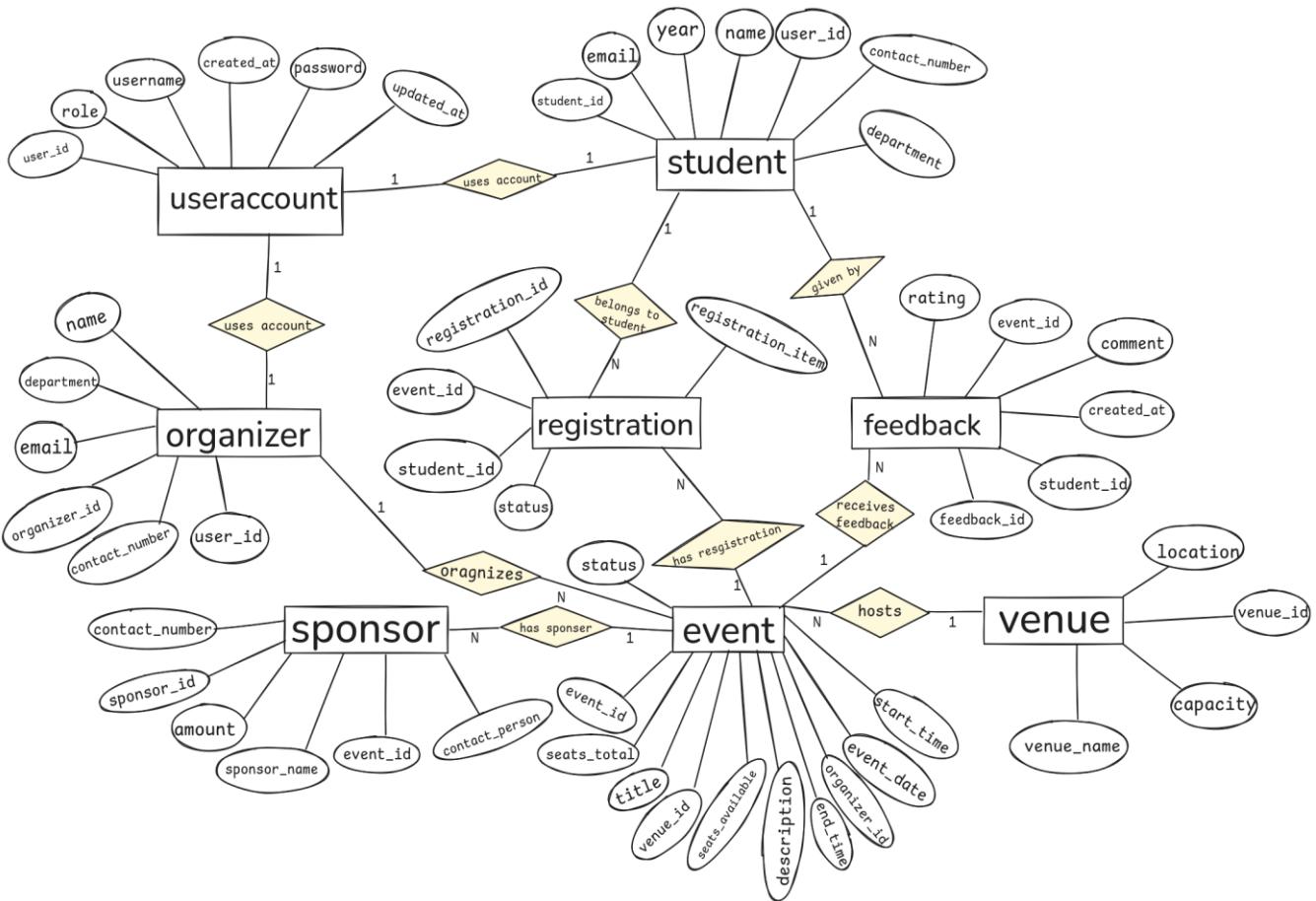
7: Sponsor:

```
mysql> desc sponsor;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| sponsor_id | int | NO | PRI | NULL | auto_increment |
| name | varchar(150) | NO | | NULL |
| contact_info | varchar(255) | YES | | NULL |
| contribution | decimal(10,2) | YES | | 0.00 |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

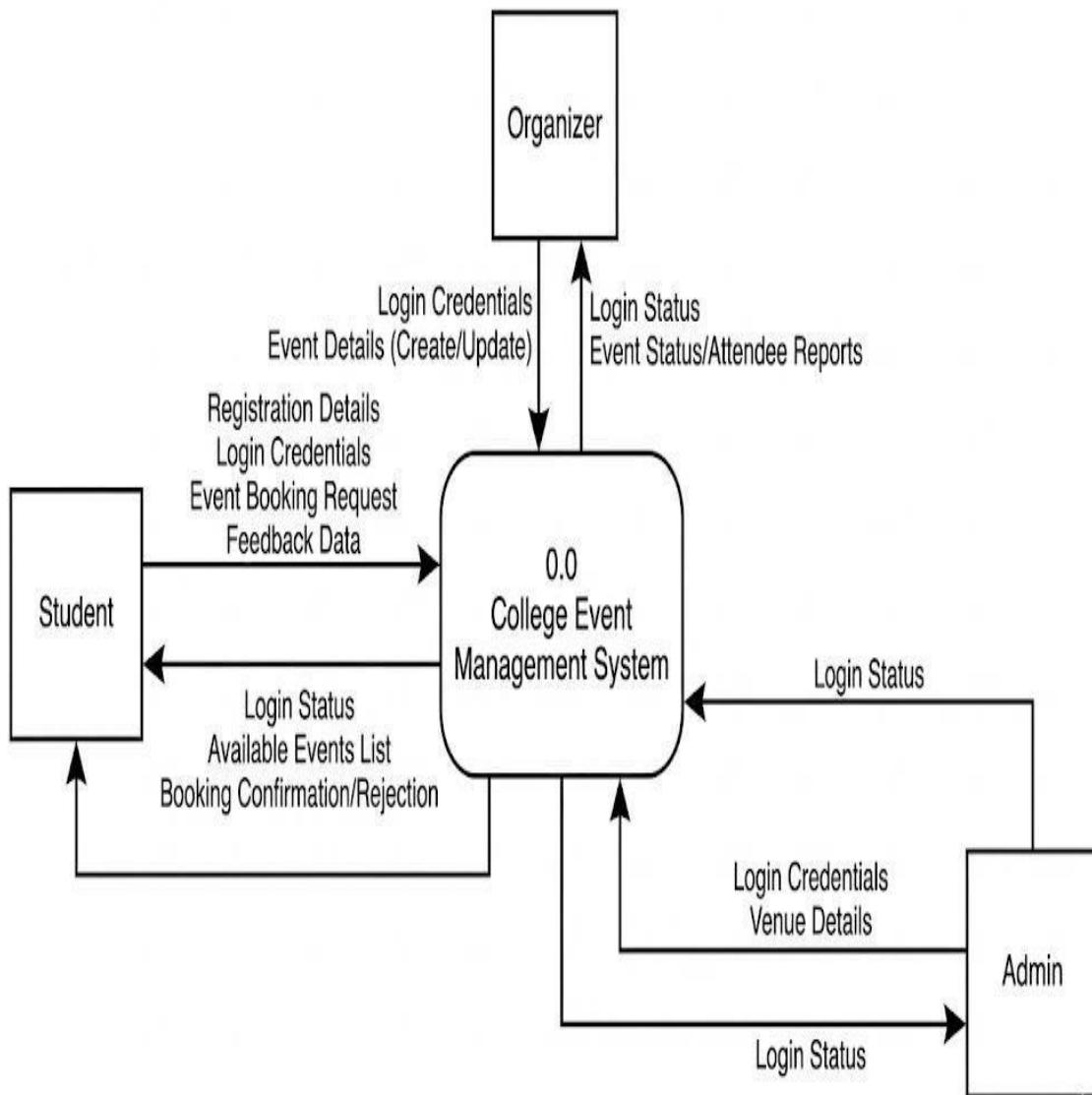
8: Feedback:

```
mysql> desc feedback;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| feedback_id | int | NO | PRI | NULL | auto_increment |
| event_id | int | NO | MUL | NULL |
| student_id | int | YES | MUL | NULL |
| rating | int | YES | | NULL |
| comment | text | YES | | NULL |
| created_at | timestamp | YES | | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

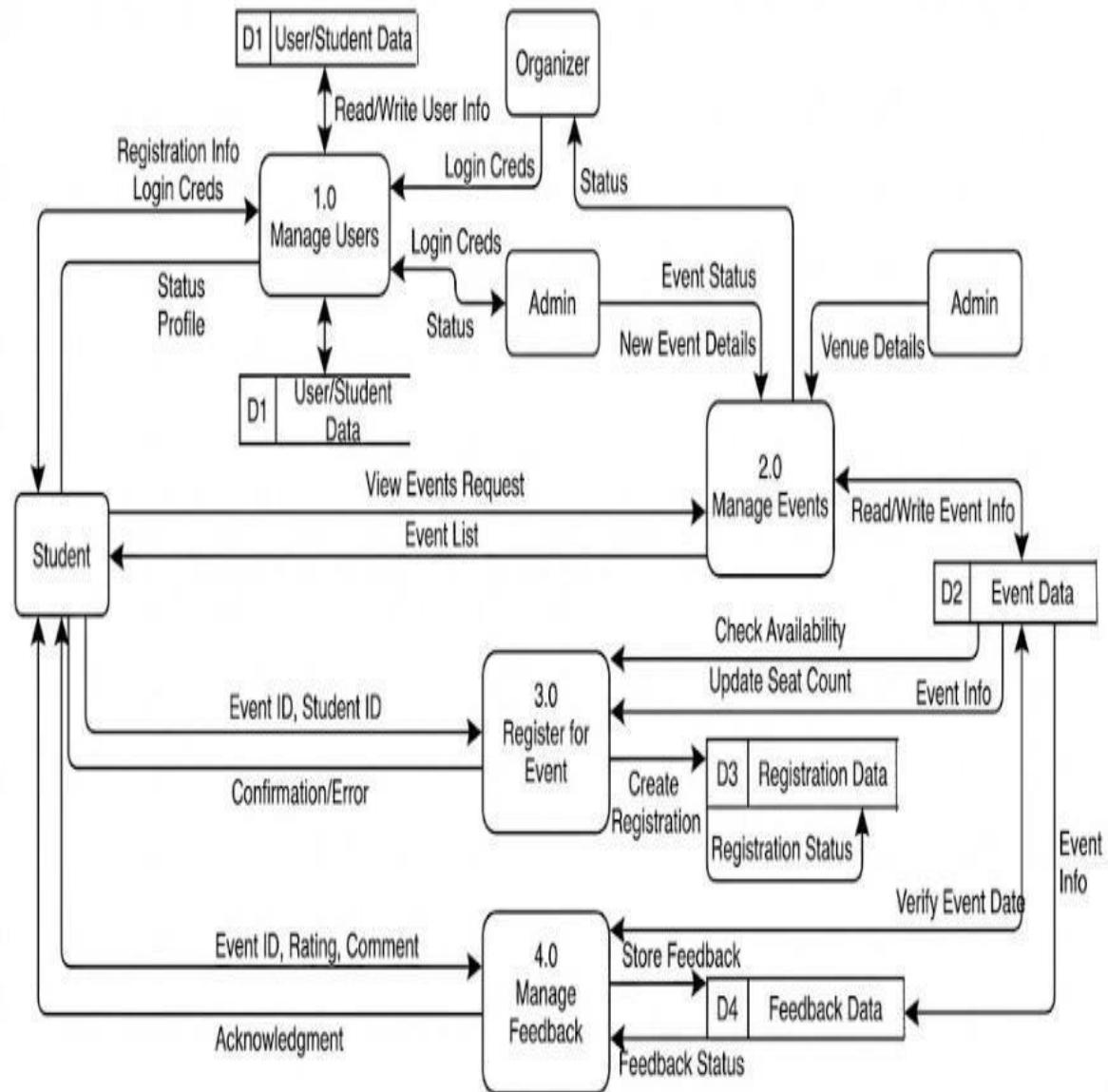
ER Diagram:



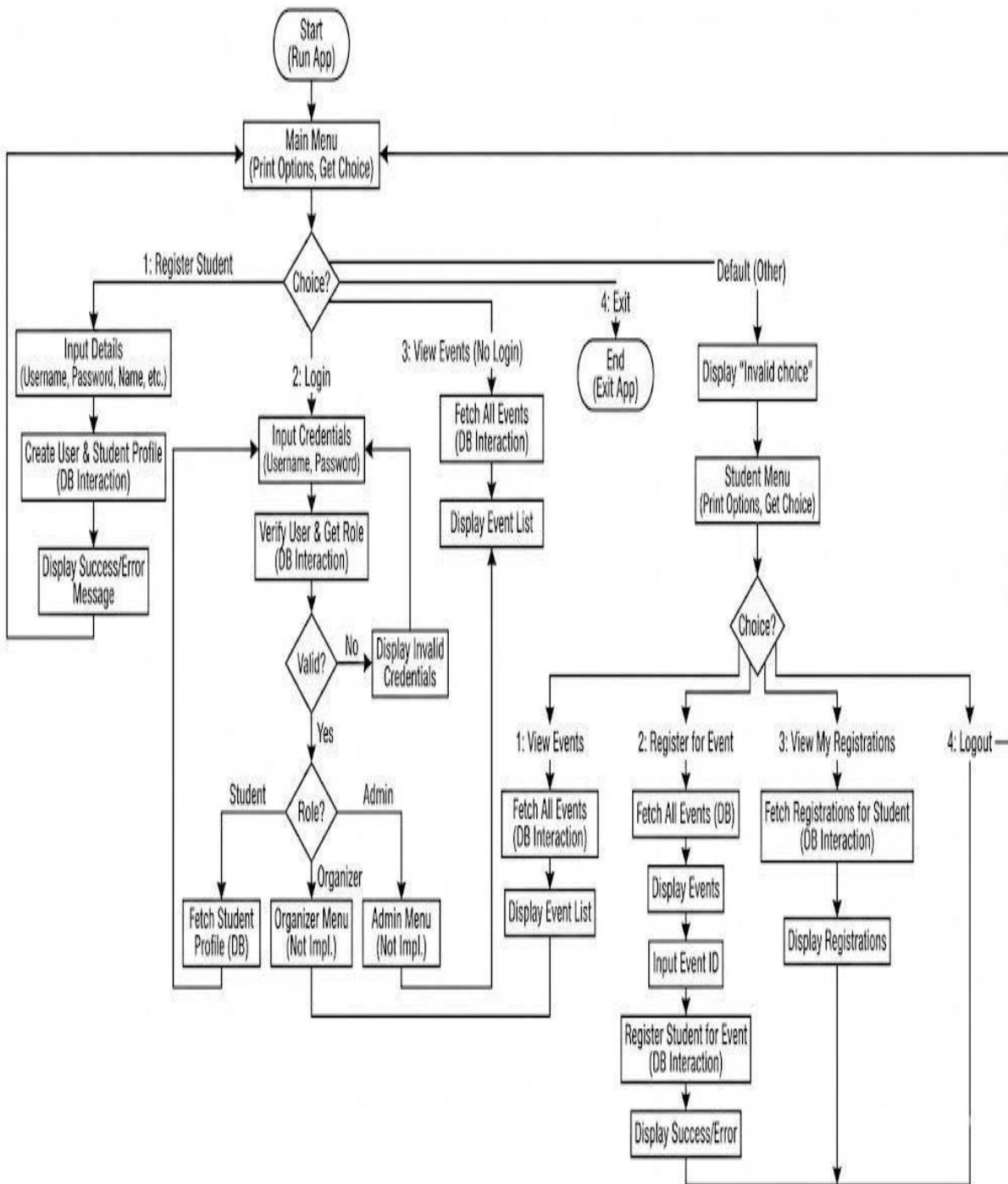
DFD -0



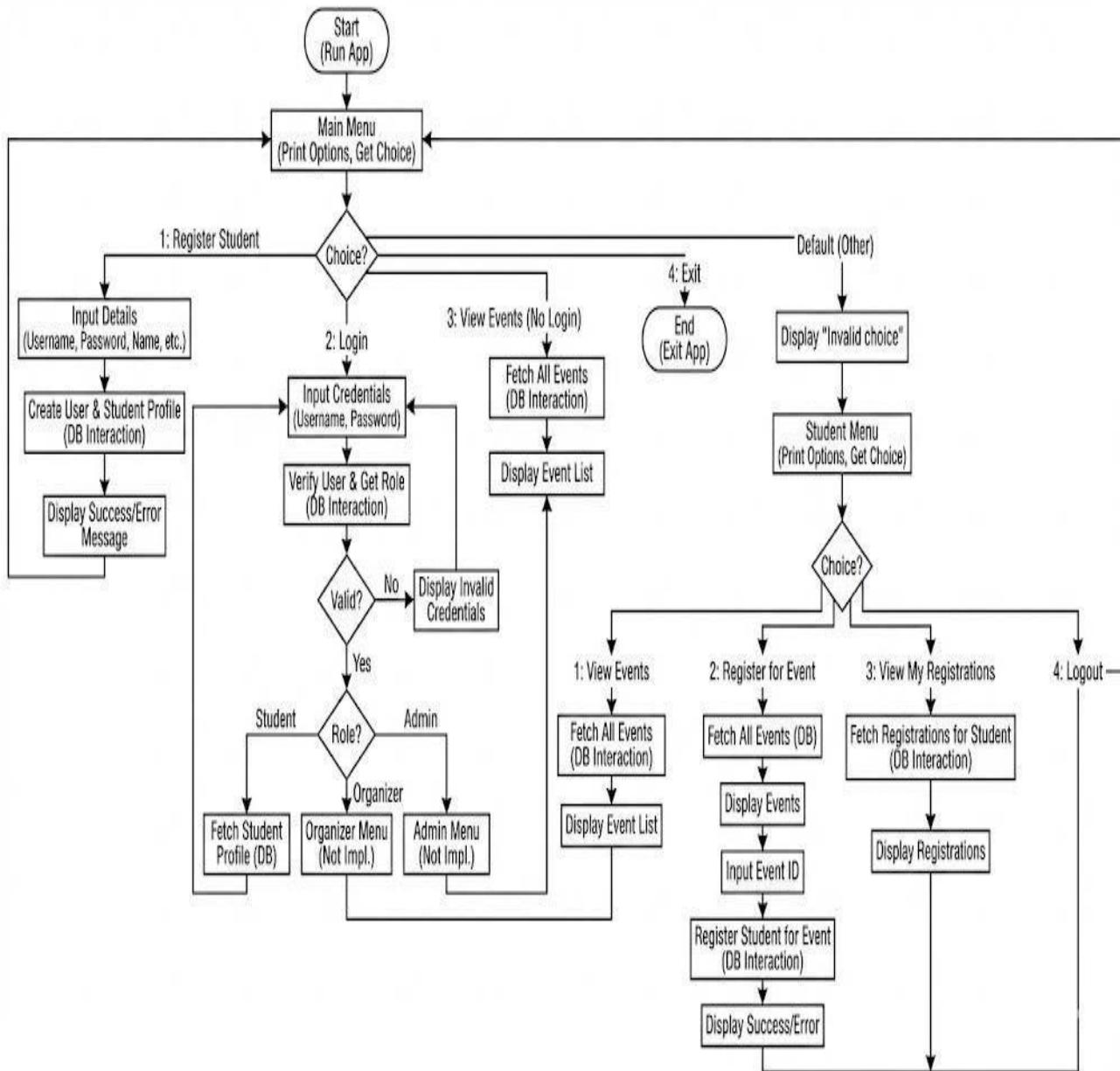
DFD 1



DFD 2



Process Logical Diagram



Software & Hardware Requirements :

Category : Specification

OS : Windows / Linux

Programming Language : Java (JDK 8 or higher)

Database : MySQL Server

Connector : JDBC MySQL Connector

IDE : Eclipse (Maven Enabled)

Hardware : Minimum: Core i3, 4GB RAM

Future Scope :

- **Mobile and Web UI Version**
- **Automated event reminder notifications by email/SMS**
- **QR-code based entry verification**
- **Certificate generation for participants**
- **Advanced analytics dashboard**

Bibliography :

- **Oracle Official Java Documentation**
- **MySQL Reference Manual**
- **JDBC API Documentation**
- **Stack Overflow & W3Schools**
- **Tutorials Point**