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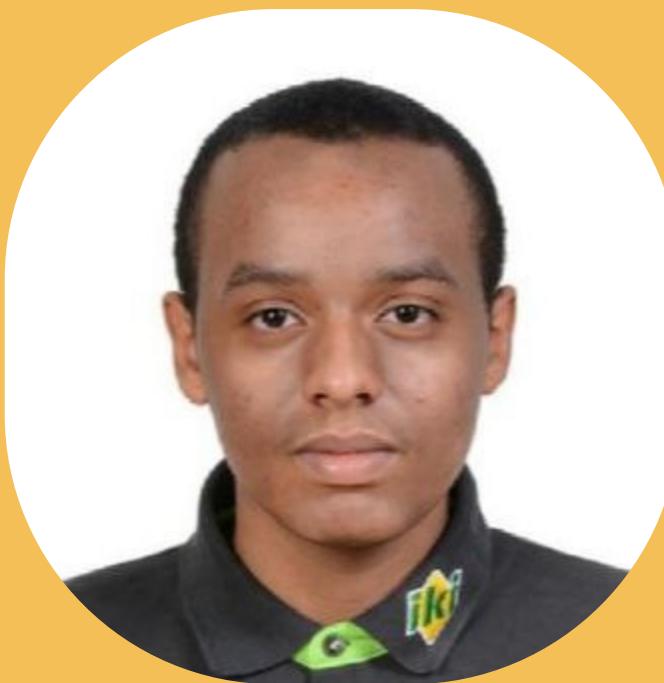
# **Clubhub,** an event management application

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**Group 8**

Team Members

# Group 08



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A23CS0261



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A23CS0199

# INTRODUCTION

Students at our campus face challenges in accessing timely information about various clubs and societies, hindering their ability to explore and engage in extracurricular activities. The campus group messages, intended for communication, are flooded with commercial spam, making it difficult for students to find relevant club information. Additionally, there is a lack of exposure for many clubs, making it challenging for students to discover the diverse options available on campus. To address these issues, Clubhub has been proposed as a centralized platform designed to revolutionize the way students discover, communicate, and participate in campus clubs and events.



# PROBLEM STATEMENT

**Campus group  
messages are  
flooded with spam**

- time consuming and unsatisfactory
- causes students to miss important event promotions
- shares the same information and spam messages

**Uncentralized  
platform for  
communication of  
information**

- creates a confusing situation
- difficult to trace back certain useful information

**Lack of exposure to  
niche clubs**

- a lot of smaller clubs might not be able to get much event information out
- many students are not aware of the existence of these clubs.



# **FINAL SOLUTION**

## **Centralized platform**

- Solely purposed for promoting diverse events and activities
- Reduces the burden of navigating through multiple social media groups and channels.
- Minimizes the likelihood of missing important event promotions.

## **User-Friendly**

- publish details of events
- Ensures ease of use and accessibility.
- Allows clubs and societies to publish event details effortlessly.
- Provides users with relevant, non-spammy information.

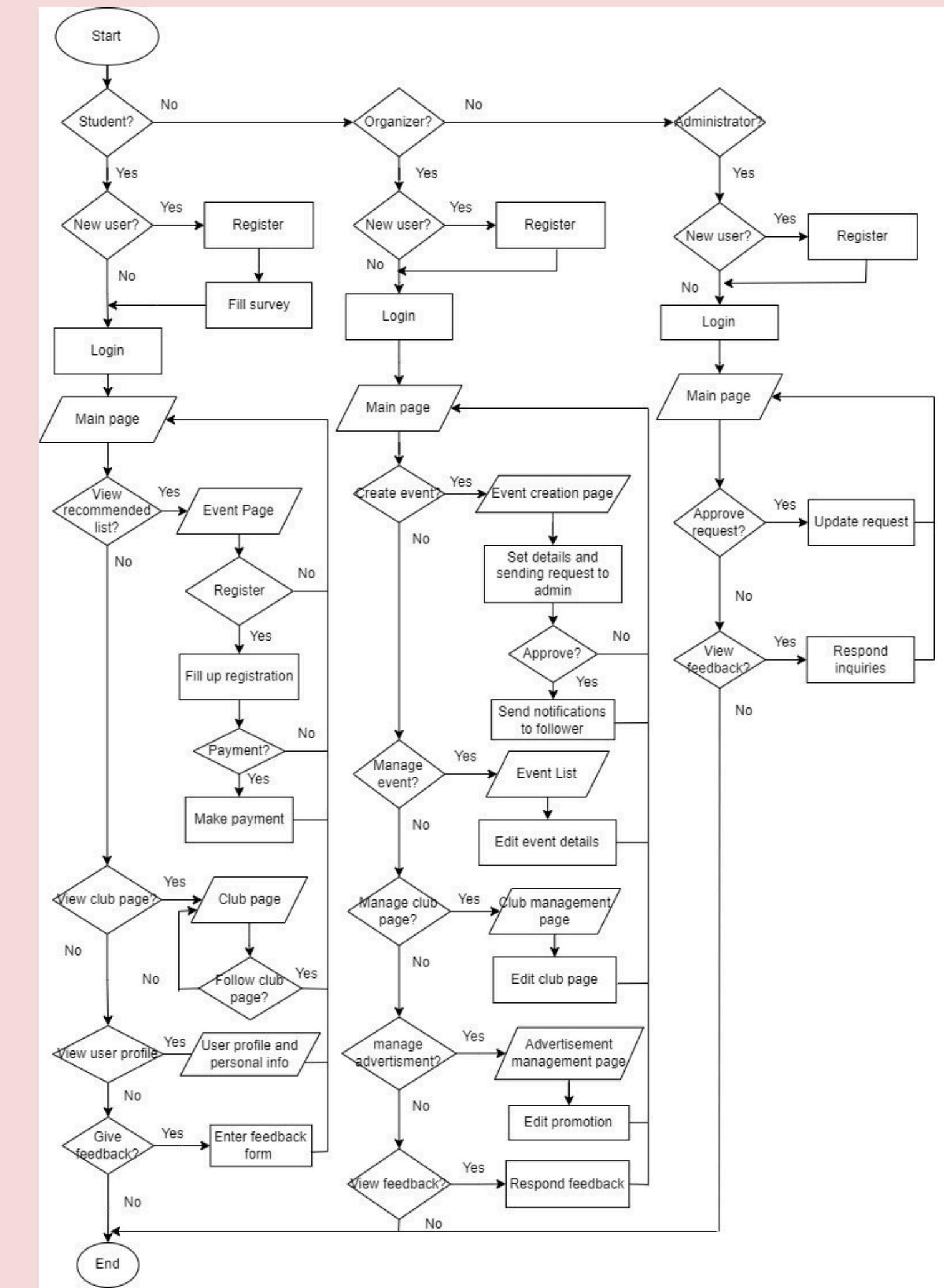
## **Dedicated Club Sections**

- Each club or society has its own section within the application.
- Displays club history, purpose, membership details, and past activities.
- Empowers students to make informed decisions about which clubs to join.

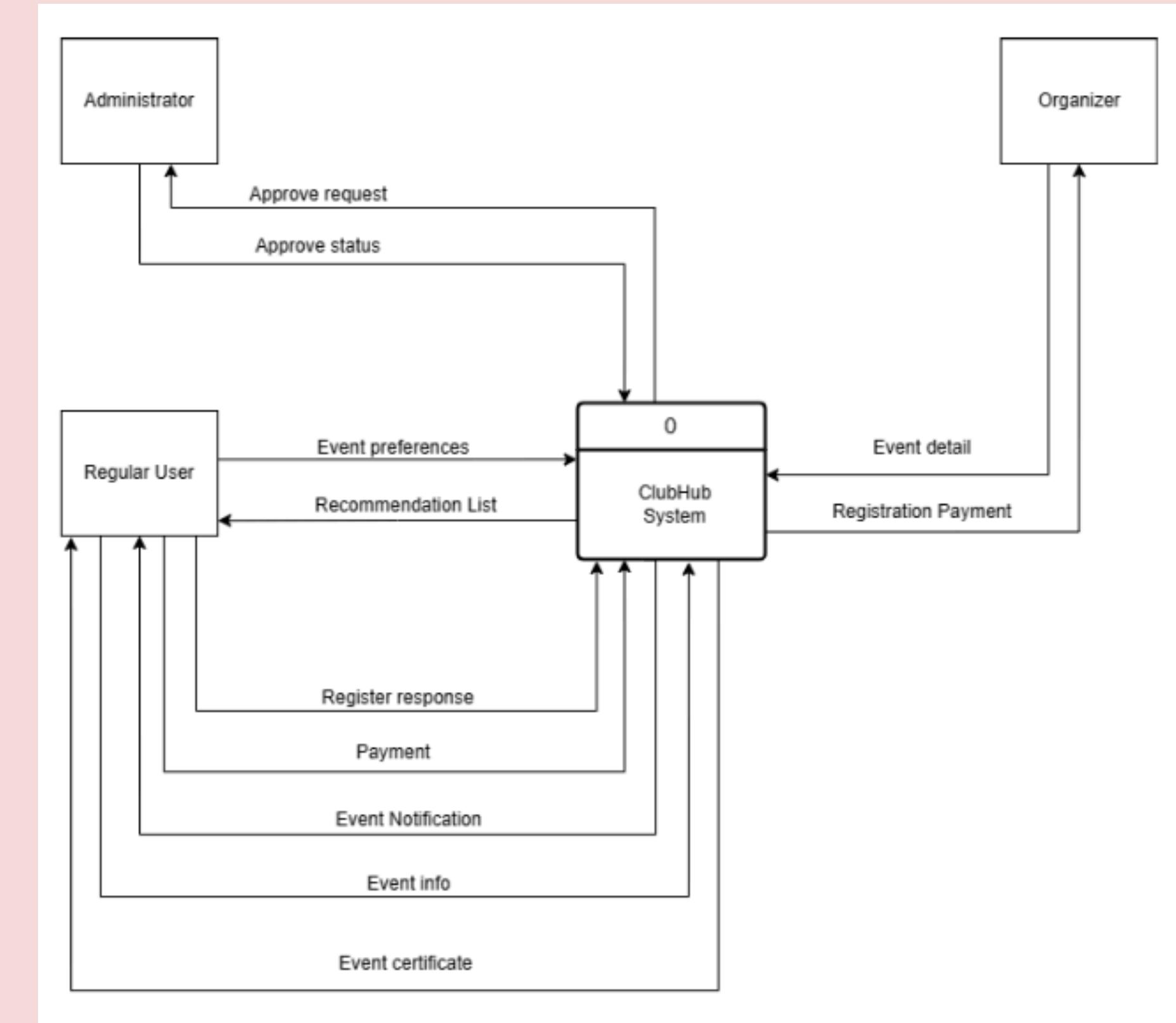
## **Event Records Repository**

- Includes reviews, and participant feedback from past events.
- Provides valuable insights for students to make informed decisions about future participation and engagement.

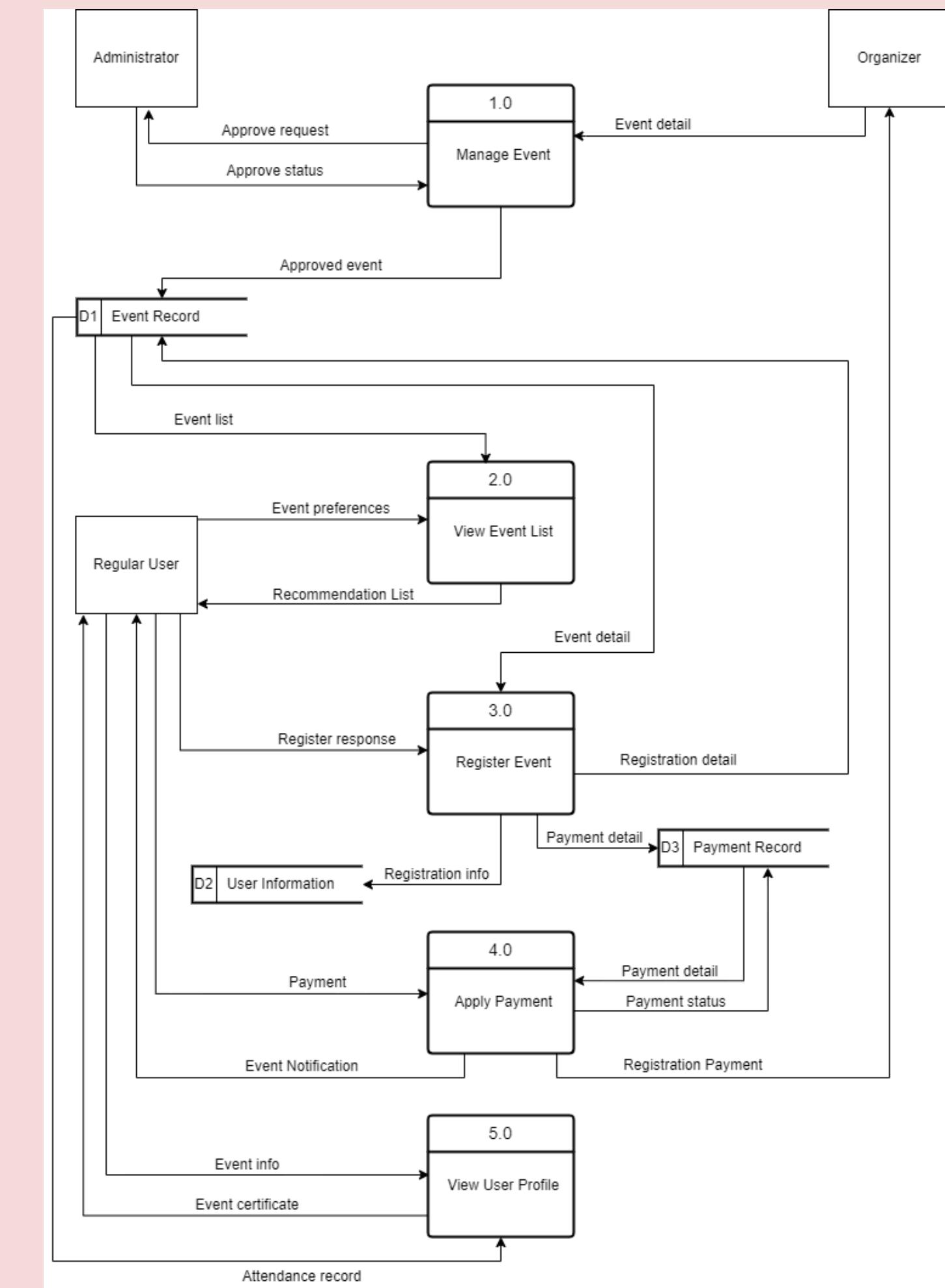
# Current business process (scenarios, workflow)



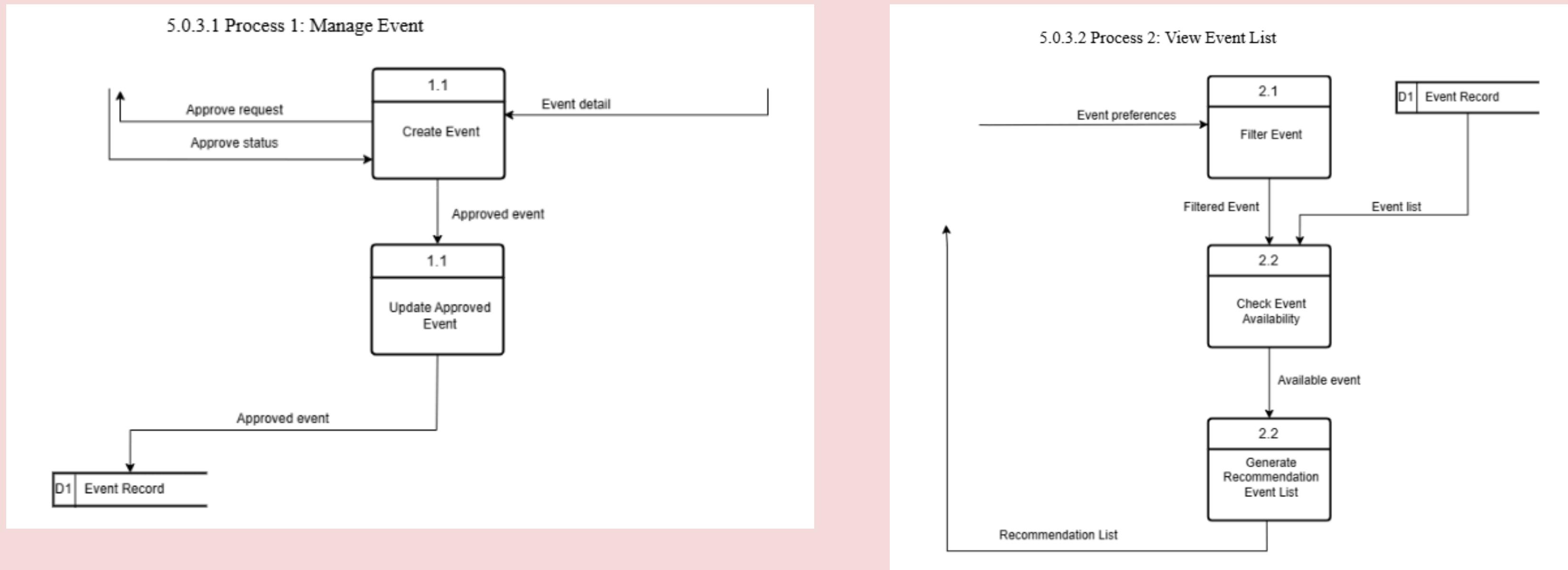
# Logical DFD AS-IS system



# Logical DFD AS-IS system

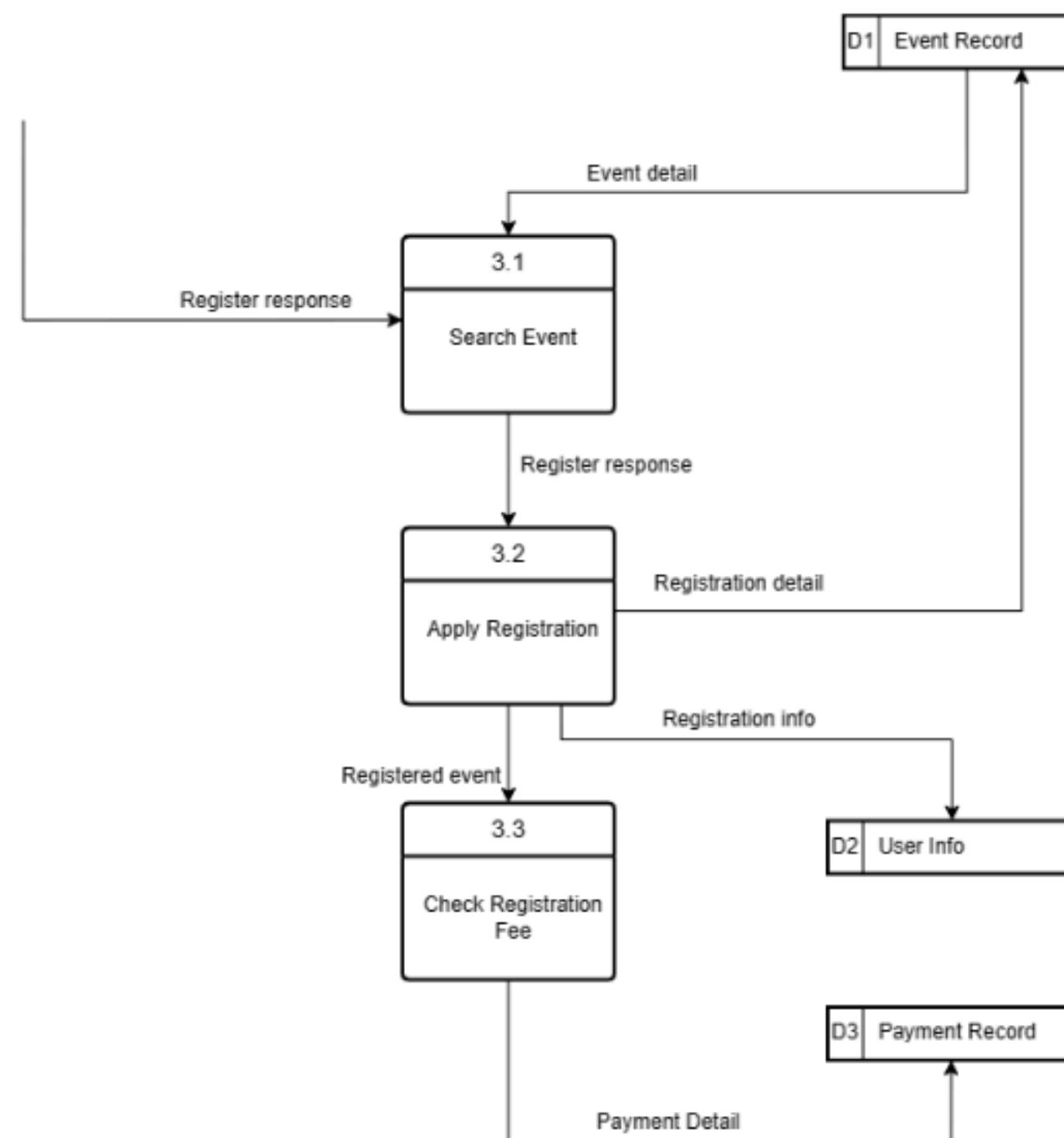


# Logical DFD AS-IS system

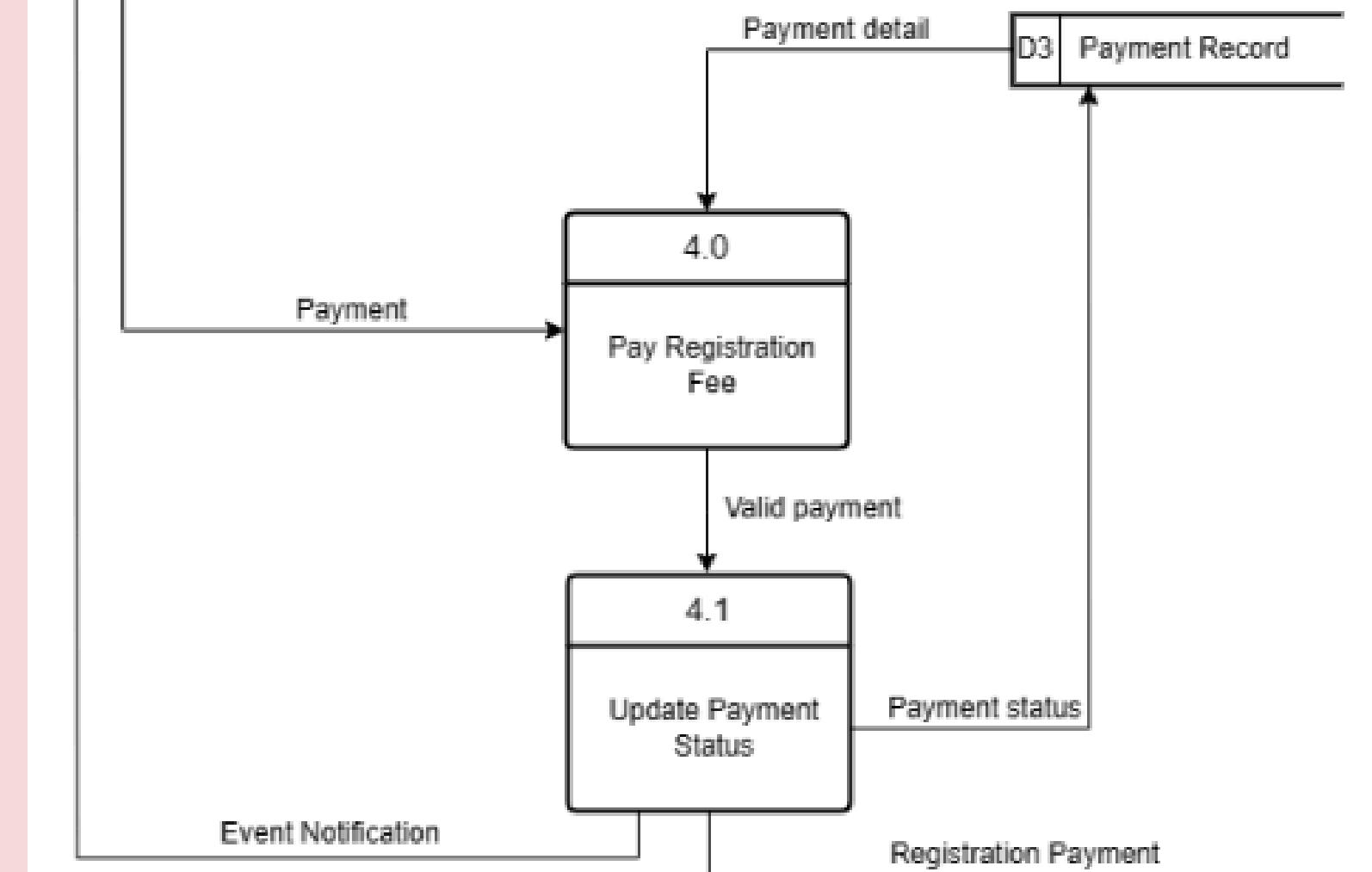


# Logical DFD AS-IS system

5.0.3.3 Process 3: Register Event



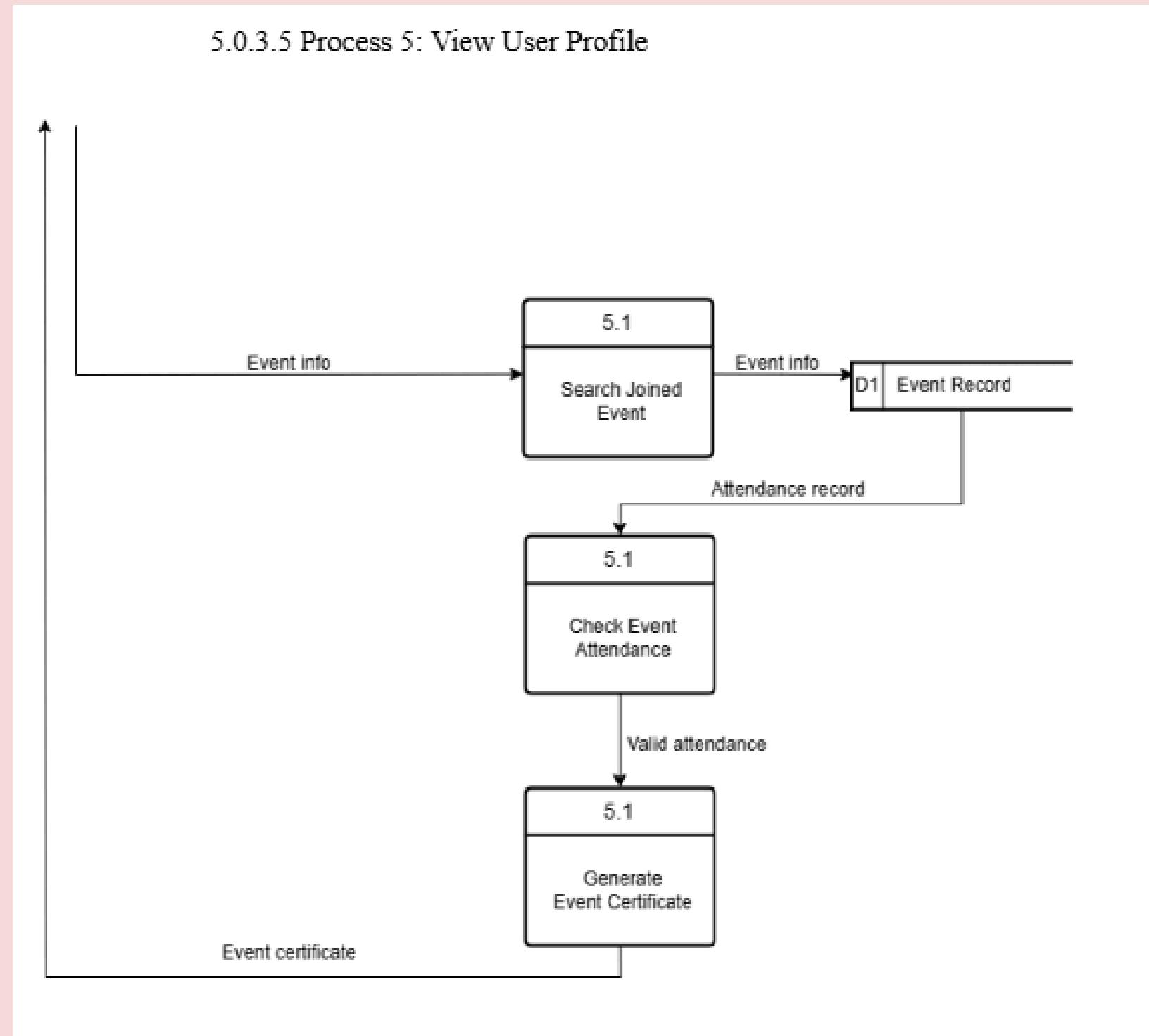
5.0.3.4 Process 4: Apply Payment



Event Notification

Registration Payment

# Logical DFD AS-IS system



# **6.0 System Analysis and Specification**

**6.1 Logical DFD TO-BE system  
(Context Diagram, Diagram 0, Child)**

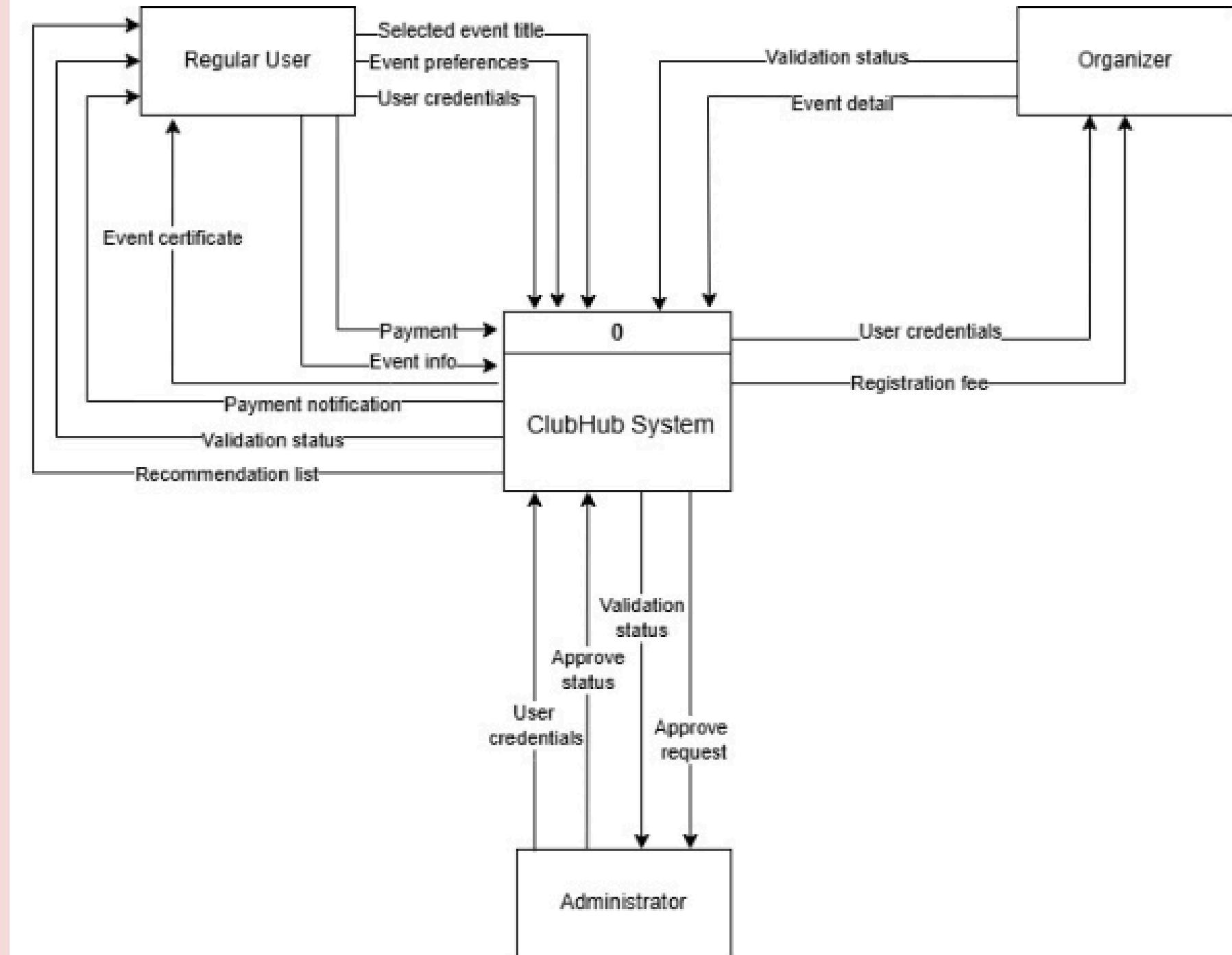
**6.2 Process Specification  
(based on Logical DFD TO-BE)**

## 6.1 Logical DFD TO-BE system (Context Diagram)

**3 entities:**

- Regular user
- Organizer
- Administrator

Context Diagram



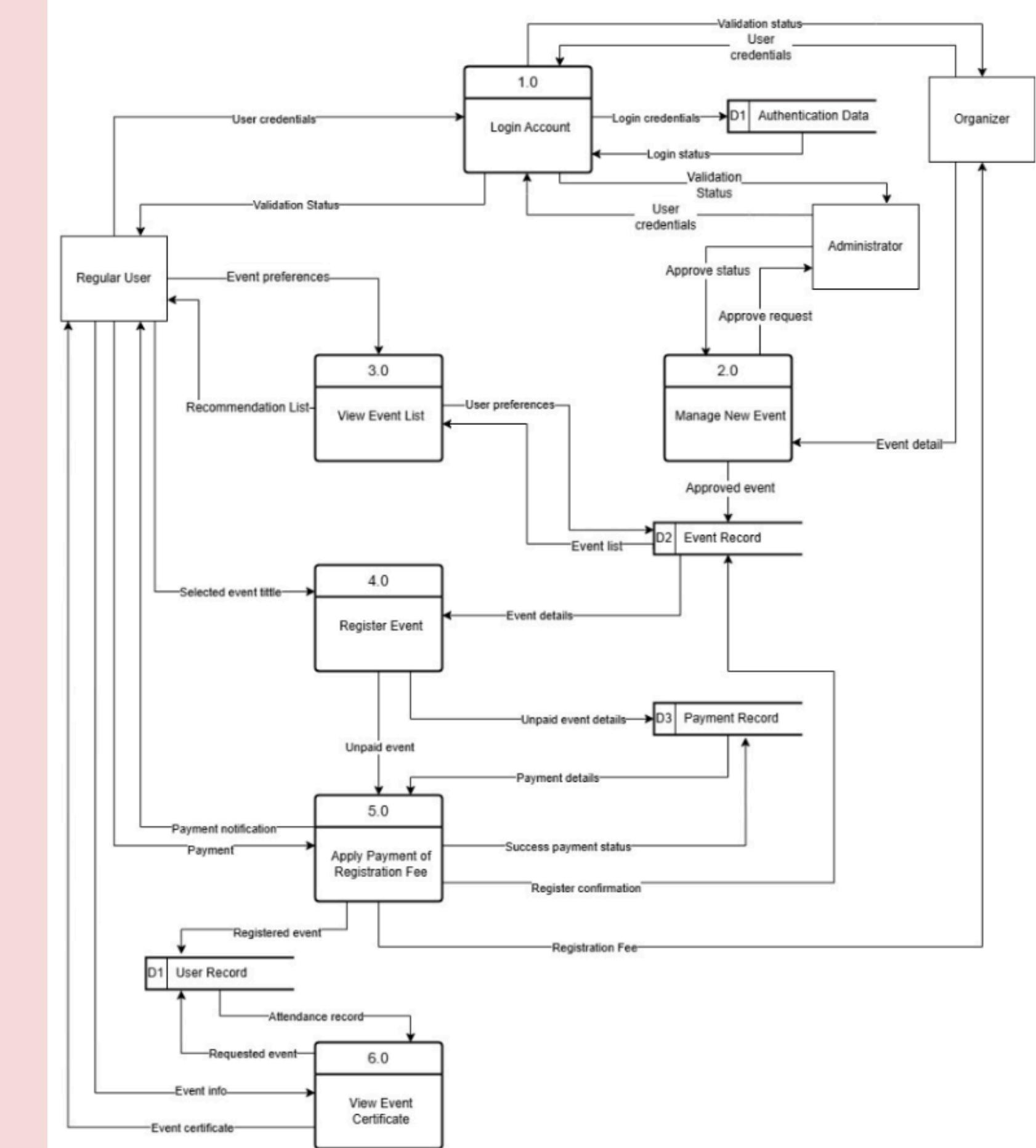
# 6.1 Logical DFD TO-BE system (Level 0)

## 6 main process :

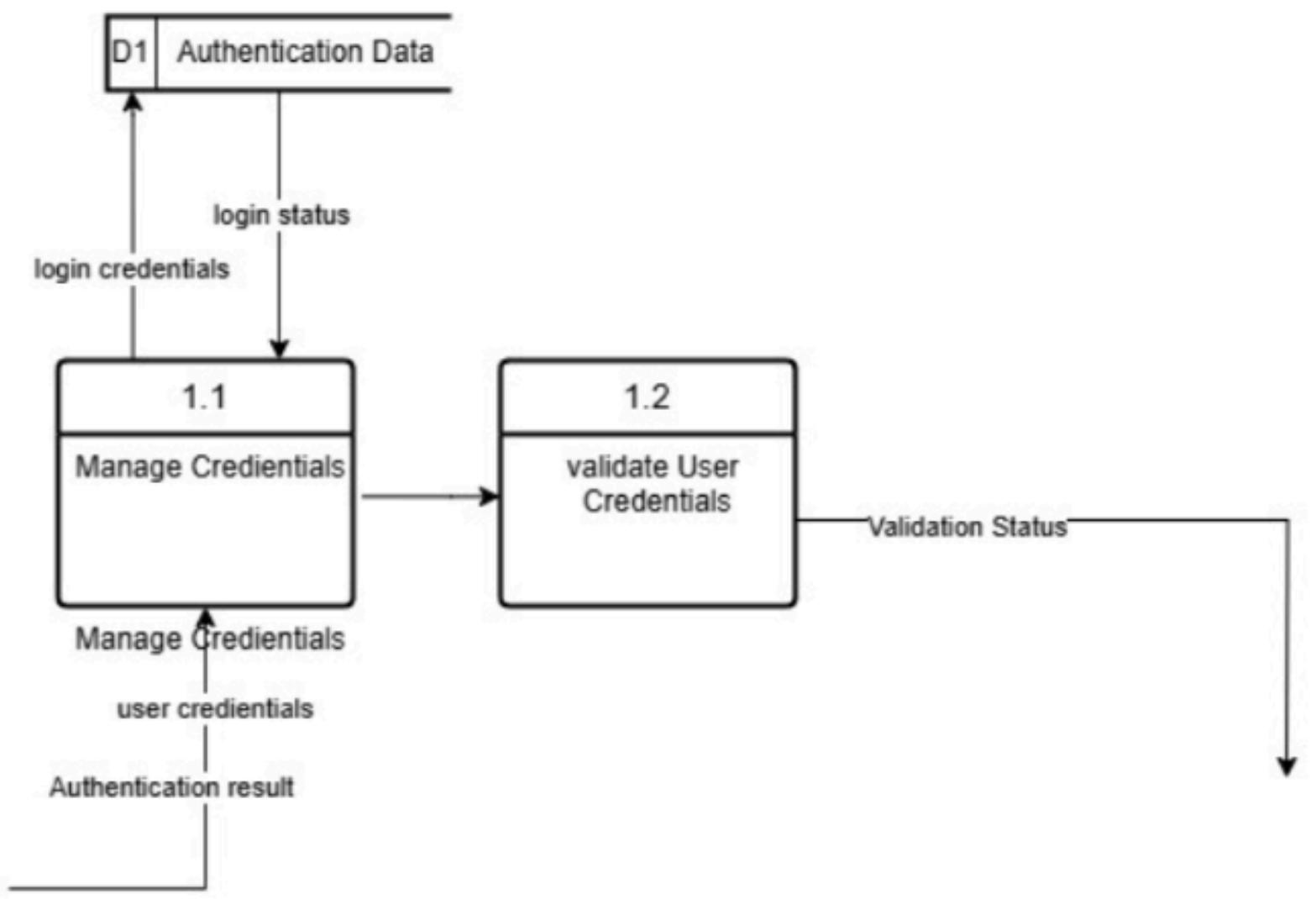
- Login Account
- Manage New Event
- View Event List
- Register Event
- Apply Payment of Registration Fee
- View Event Certificate

## 4 data stores:

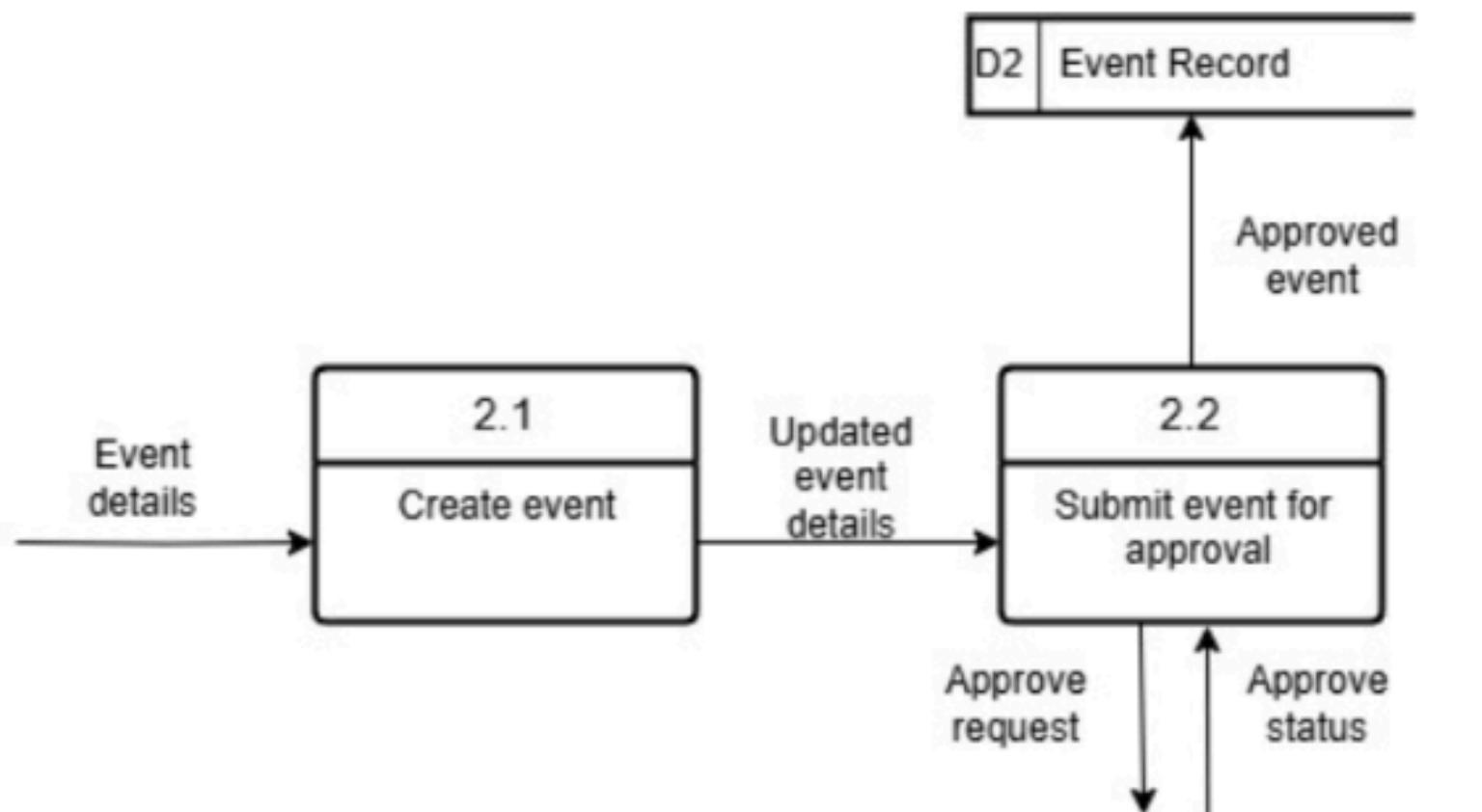
- Authentication data
- Event Record
- User Record
- Payment Record



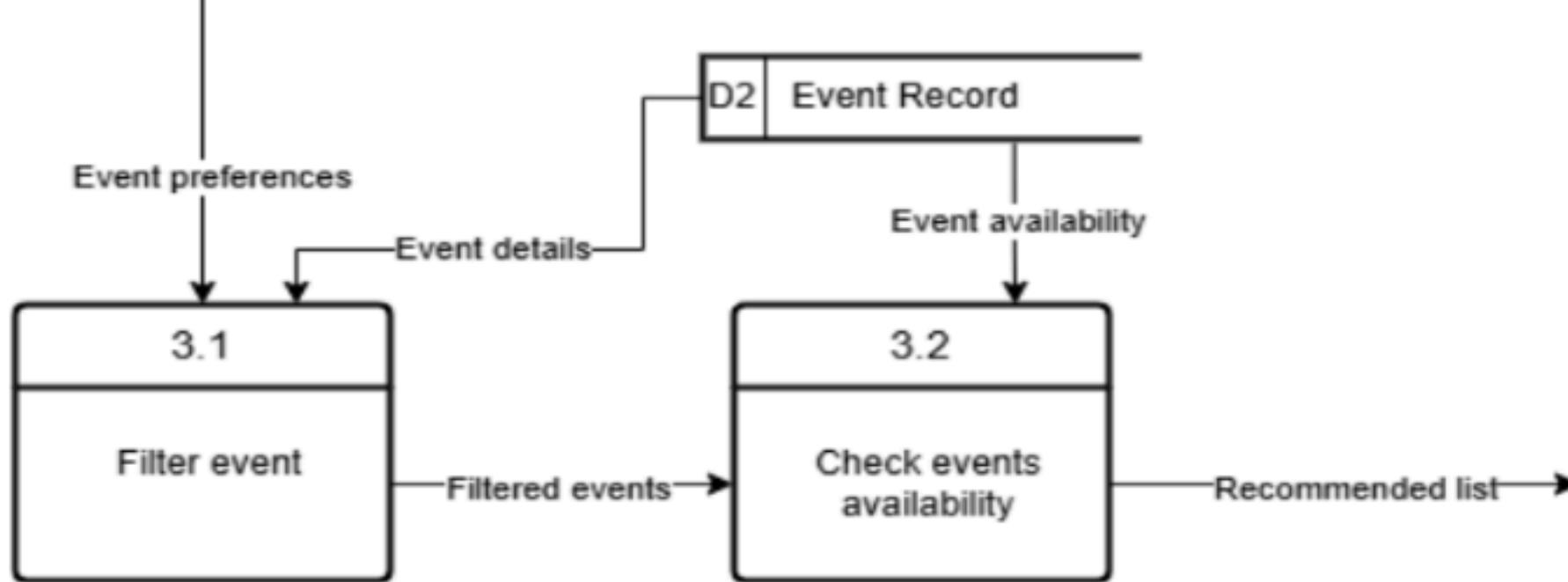
Process 1.0 Login account



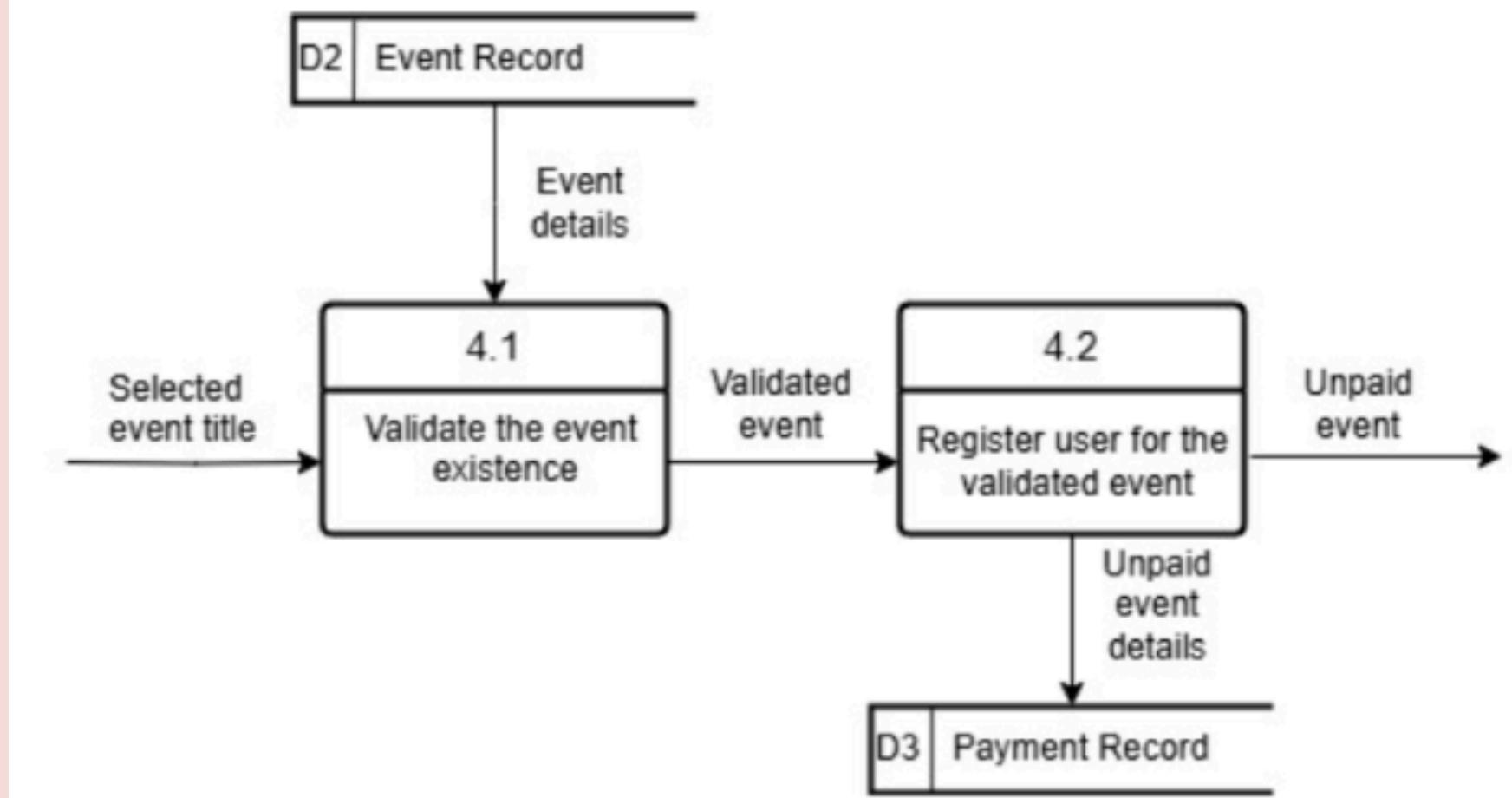
Process 2.0 Manage event



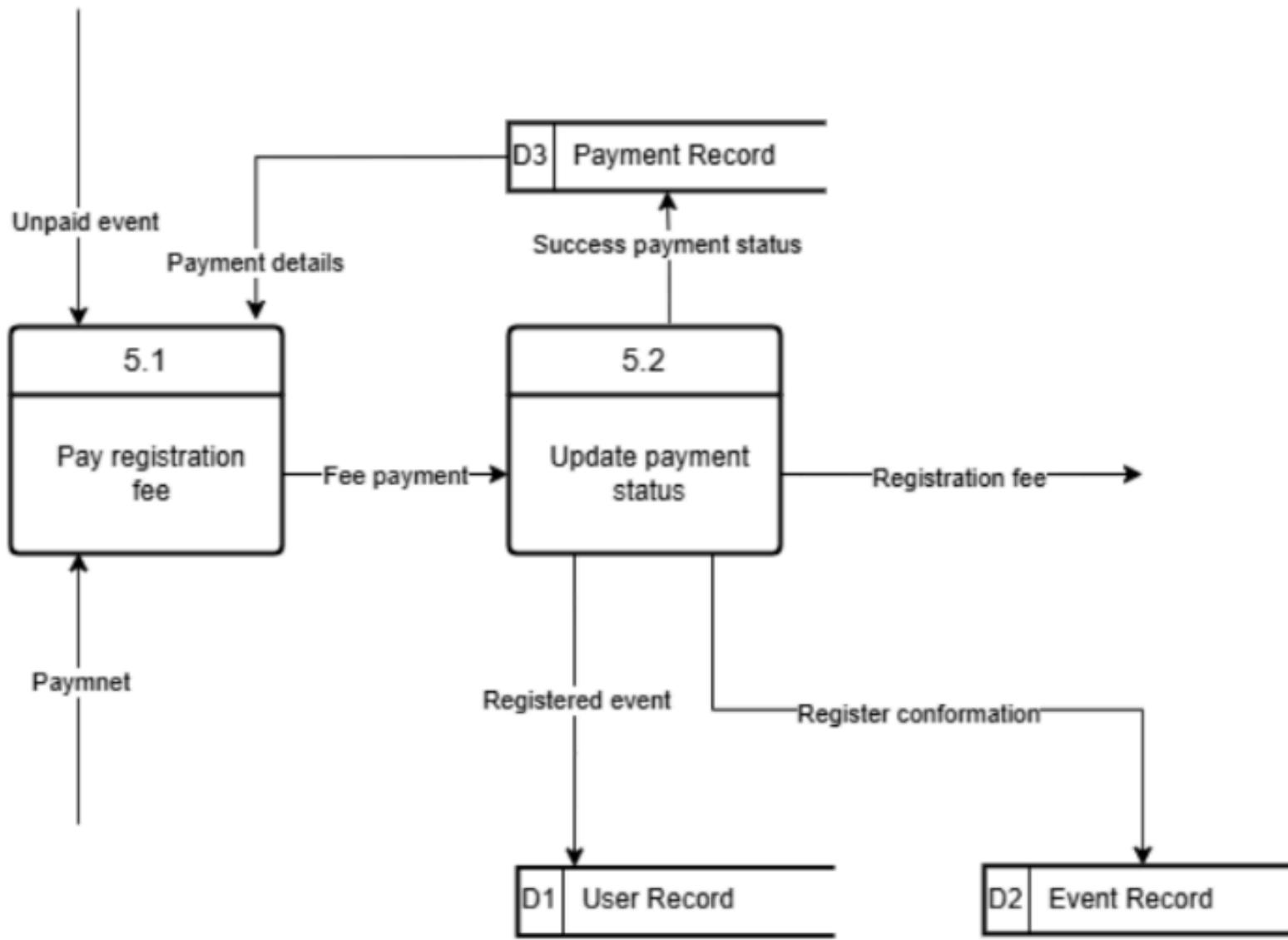
## Process 3.0 View event list



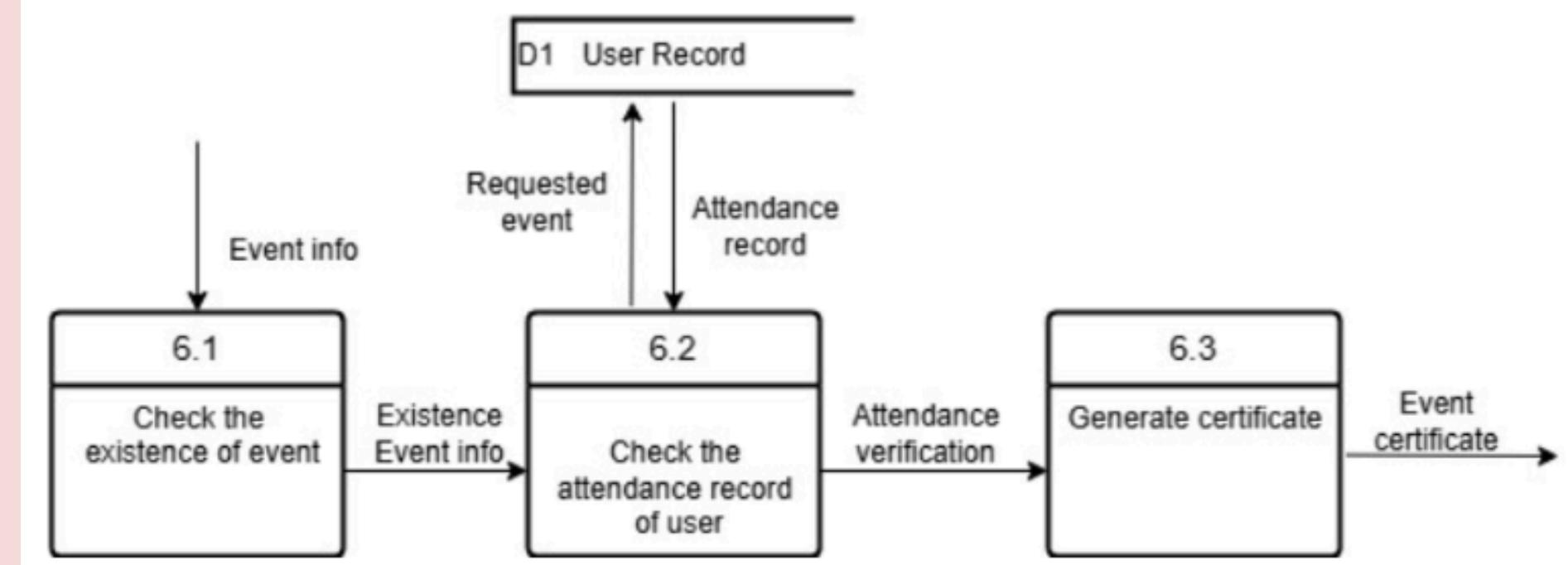
## Process 4.0 Register event

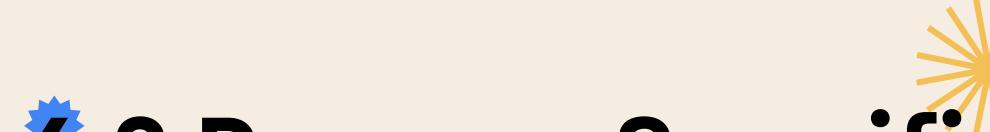


### Process 5.0 Apply payment for registration fee



### Process 6.0 View event certificate





## 6.2 Process Specification (based on Logical DFD TO-BE)

1

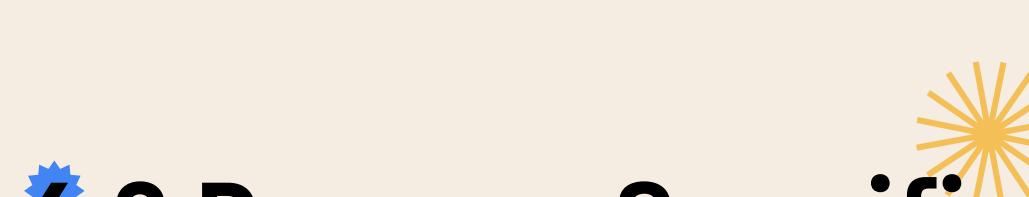
### Child diagram 1 : Login Account

```
DO
READ User Credentials
SEND Login Credie
VALIDATE Credentials
BEGIN IF
IF Credential status = TRUE
    THEN Send validation
ELSE
    PRINT Incorrect Credentials
ENDIF
```

2

### Child diagram 2 : Manage new event

```
DO
READ Event details
UPDATE approval
BEGIN IF
IF Event approval = TRUE
    THEN UPDATE event details
STORE event details
ELSE
    PRINT event rejected
ENDIF
```



## 6.2 Process Specification (based on Logical DFD TO-BE)

3

### Child diagram 3 : View Event list

```
DO
  READ Event Preferences
  READ Event Records
  BEGIN IF
    IF Event Preferences = event Record
    details
      BEGIN IF
        IF Event Availability = TRUE
          THEN DISPLAY event
        ELSE
          DISPLAY NULL
        ENDIF
      ENDIF
    ENDIF
  ENDWHILE
```

4

### Child diagram 4: Register event

```
DO
  READ selected event title
  DO While EOF Event records == FALSE
    READ Event Records
    BEGIN IF
      IF selected event title == event Record
      title
        INCREMENT Event attendees
        UPDATE Unpaid event details
        STORE unpaid event detail
      ELSE
        DISPLAY NULL
      ENDIF
    ENDIF
  ENDWHILE
```



## 6.2 Process Specification (based on Logical DFD TO-BE)

5

### Child diagram 5 : Apply Payment for Registration fee

DO  
READ Unpaid event details  
Read payment details  
READ payment  
BEGIN IF  
IF payment status == Successful  
    THEN STORE payment status  
    Update event record  
    SEND payment to organizer  
ELSE  
    PRINT payment unsuccessful  
ENDIF

6

### Child diagram 6: View Certificate

DO  
READ Event info  
Read Event Records  
READ payment  
DO While EOF Event Records  
    BEGIN IF  
        IF Event title == event record title  
            BEGIN IF  
                IF User Name = Attendees Name  
                    GENERATE E-Certificate  
            ELSE  
                PRINT Event attendees not found  
            ELSE IF  
                PRINT Event information not found  
            ENDIF  
        ENDIF  
    ENDWHILE



# **PHYSICAL SYSTEM DESIGN**

**04**

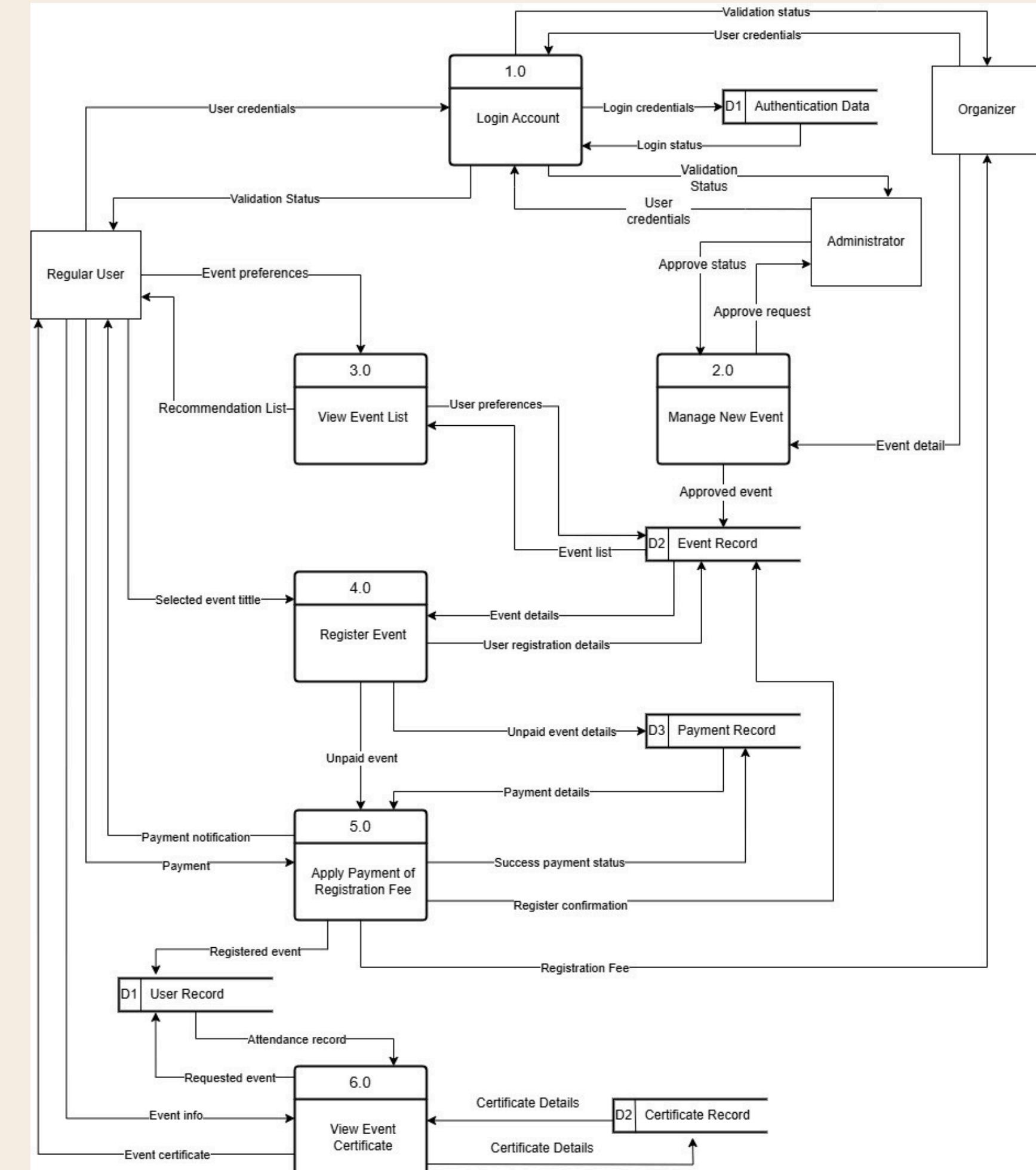
# Level 0 physical diagram:

consist of 6 main process :

- Login in: to help manage the access of the system
- Register event : enable organizers to add their events to the system
- view event List : help filter and shown the recommended events
- Manage new event : help moderate created events by the administrator giving him the ability to whether approve or decline it
- view event certificate: enable user to view their event participation certificate
- apply payment of registration: manage payments

consist of 4 main storages areas:

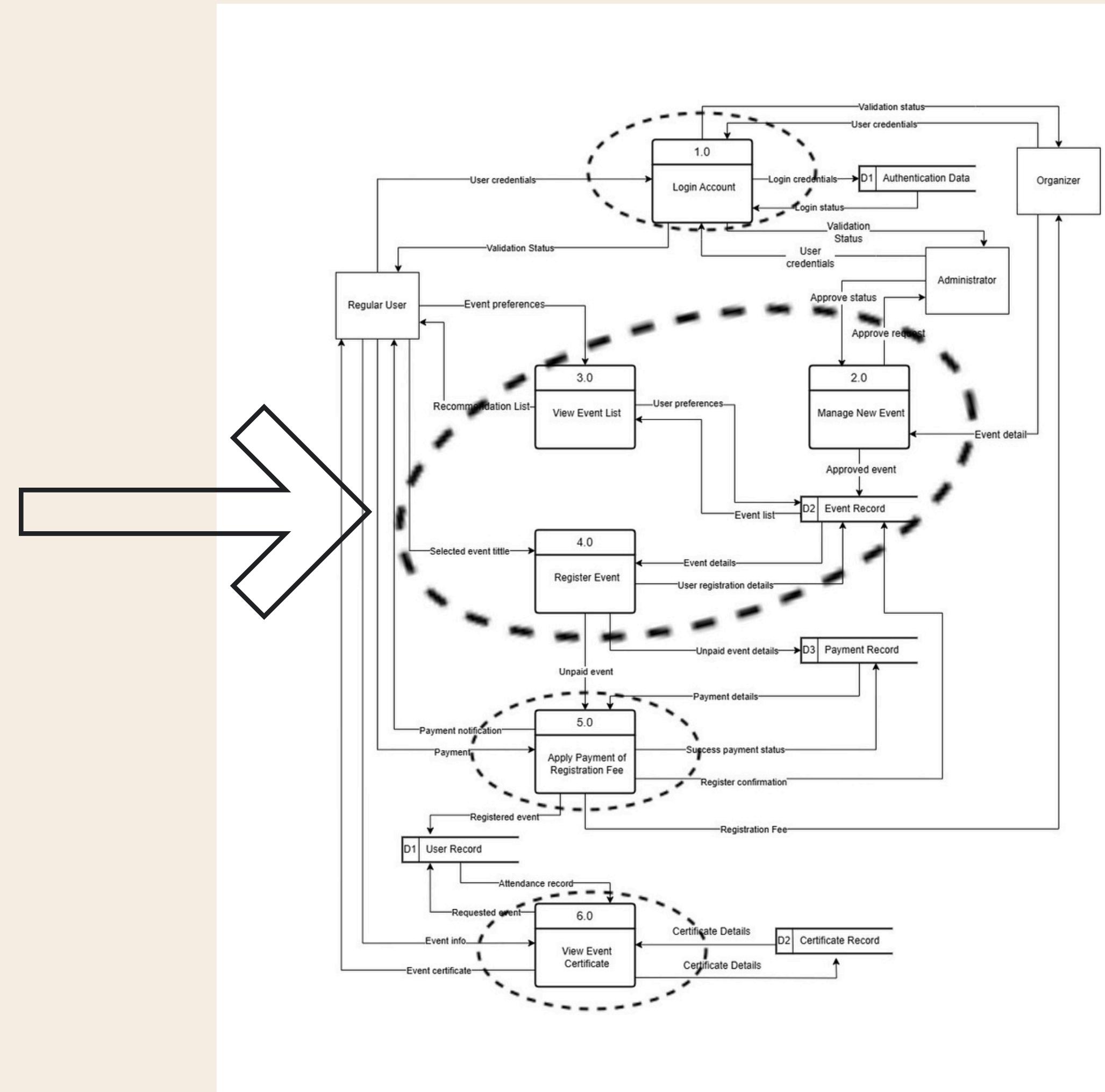
- Payment records: stores billing and invoices and also payment data
- Event records: store created event details and users
- Authentication data: stores credentials data required for authentication of users
- Certificate record : Stores all data related to certificates of all users



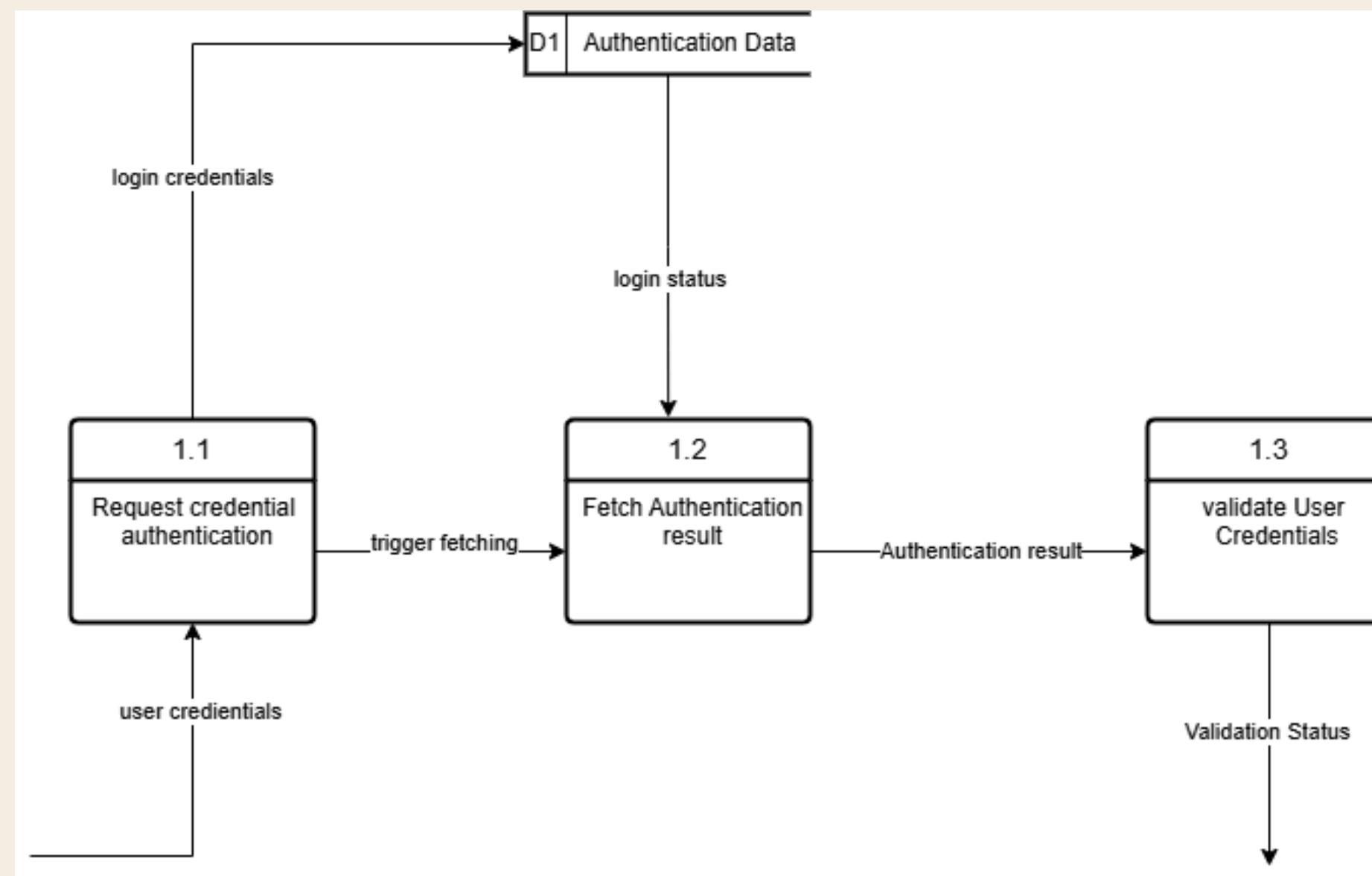
# Partitioning:

**all process are not partitioned with any other process except process (2,3,4)**

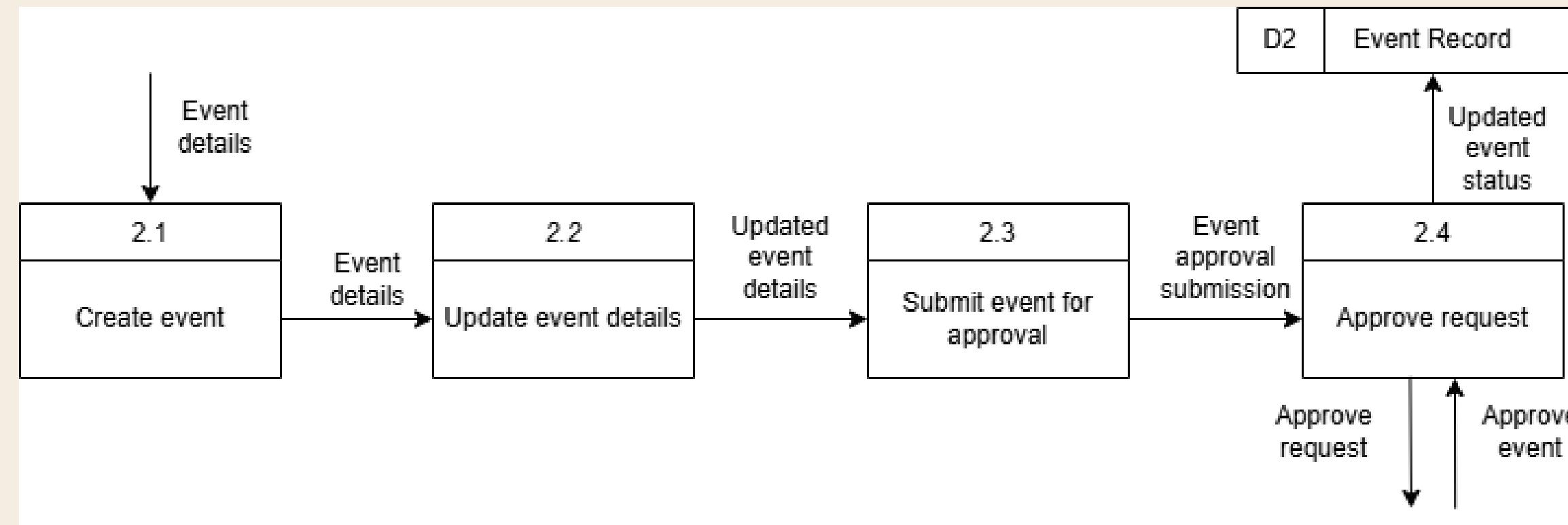
**process 2,3,4 Partitioning reason :-** since all the process are related to event management it would be more efficient if we group them together to help increase the data consistency and data security



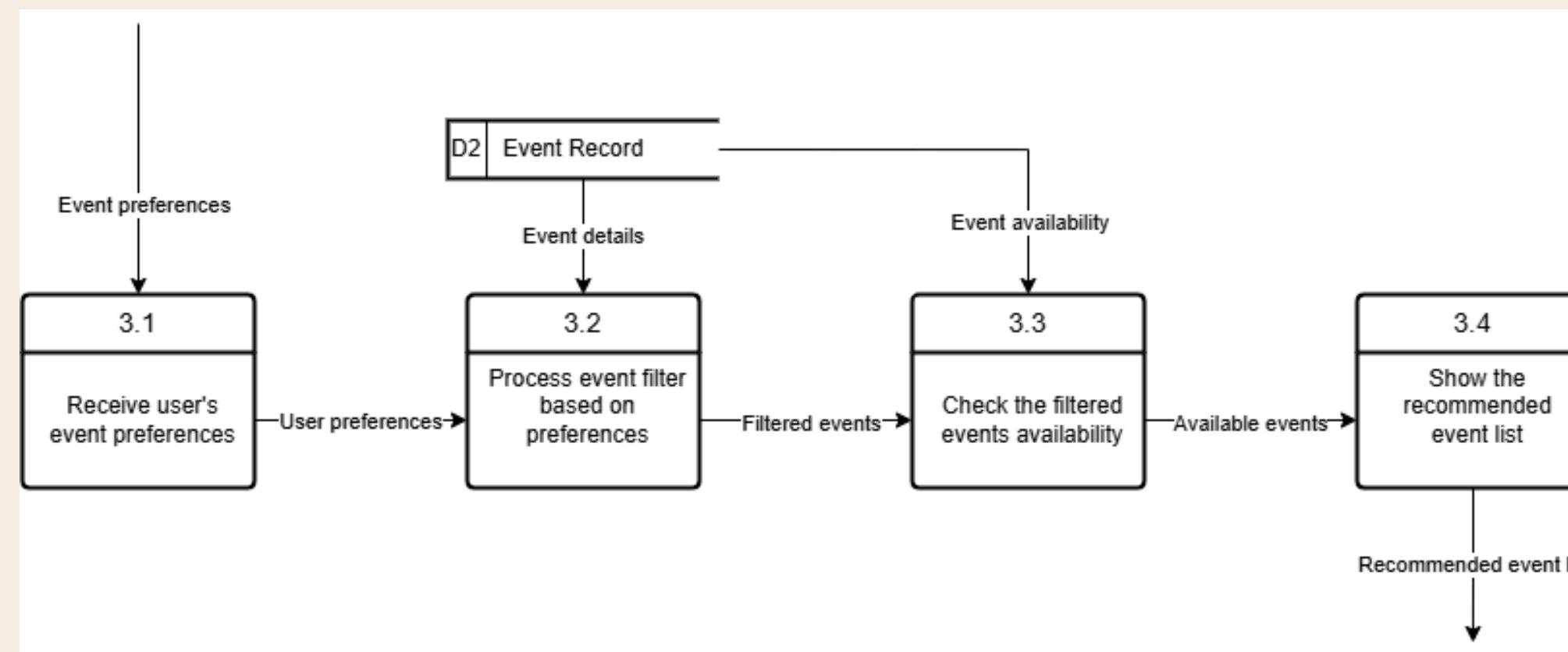
# level 1 physical dfd : process 1



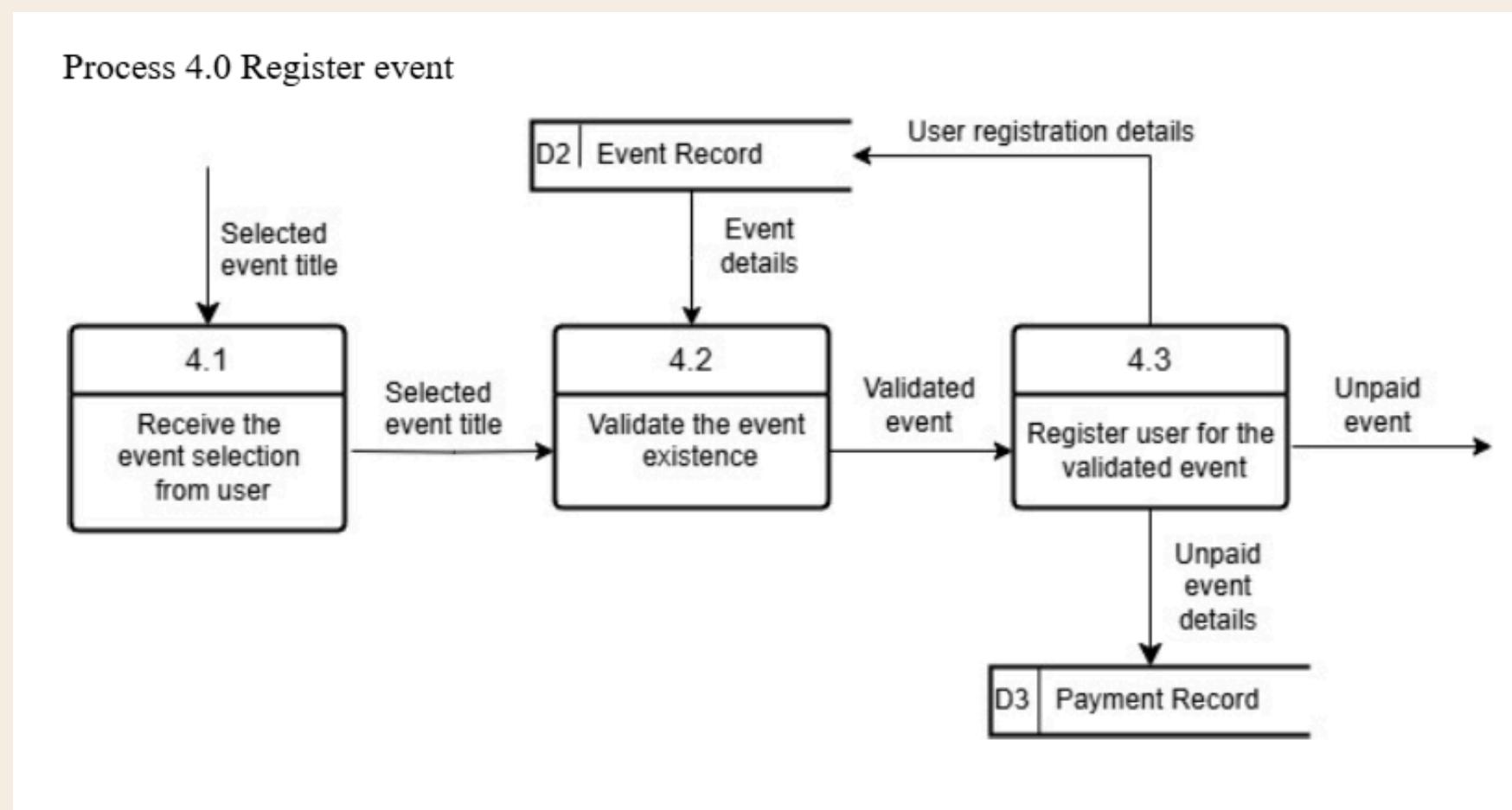
## level 1 physical dfd : process 2



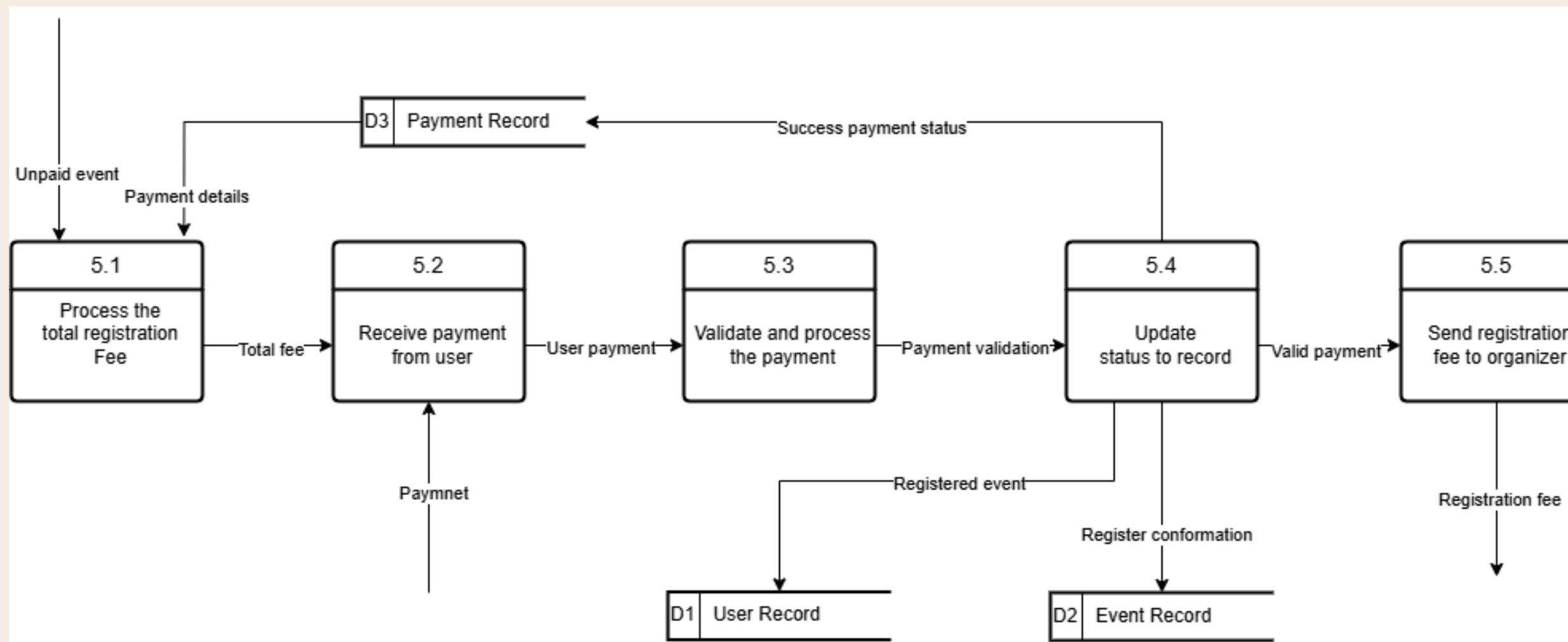
## level 1 physical dfd : process 3



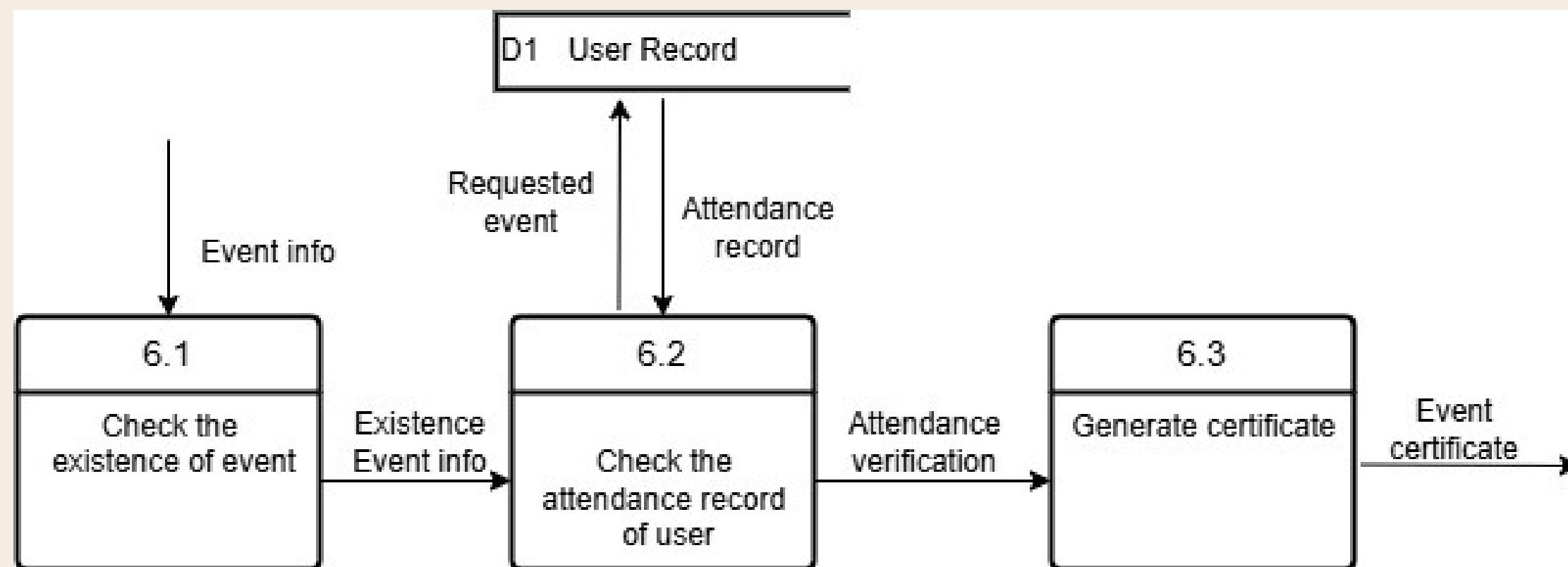
## level 1 physical dfd : process 4



## level 1 physical dfd : process 5



## level 1 physical dfd : process 6



# CRUD MATRIX for physical dfd

**CRUD stands for Create, Read, Update, and Delete. It is used to represent where these operations occur within each process of the physical Data Flow Diagram (DFD).**

## CRUD Matrix for Each Process:

### 1. Login Account:

- Each user account is created during signup.
- Login details are read and updated for validity.
- Additionally, the administrator has the authority to delete other accounts.

### 2. Manage New Event:

- Only organizers and administrators can create new events.
- They can read the details of these events and update the information.
- However, only the administrator can decline the creation of an event.

### 3. View Event List:

- All users can read the event list.
- Only organizers and administrators can update it.
- Only the administrator has the authority to delete it.

### 4. Apply Payment:

- All users can create a payment request.
- They can read payment details and update the payment status.
- Only the administrator can delete payment records.

### 5. View Event Certificate:

- All users can read event certificates.
- The administrator can update or delete these records.

**CRUD Matrix**

Activity	Regular User	Organizer	Administrator
Login Account	CRU	CRU	CRUD
Manage New Event		CRU	CRUD
View Event List	R	RU	RUD
Register Event	CRU	RU	RUD
Apply Payment for Registration Fee	CRU	CRU	CRUD
View Event Certificate	R	R	RUD

# Event Response Table for the Physical DFD design

**Event Table is used to create data flow diagram by analyzing each event and the data used and produced by the event in the physical dfd**

**for each process the event table shows the data enters to it, what the process does and the data that comes out and the destination of that data**

**Event Response Table**

Event	Source	Trigger	Activity	Response	Destination
Login Account	Regular user, Organizer, Administrator	User credentials	Login account	Successful or unsuccessful login status	Regular user, Organizer, Administrator, Authentication Data
Event Created	Organizer, Administrator	Event details, event category, event images	Manage event and status approval	Notify users, update event list	Regular user, Event Record
Event Registration	Regular user	User details, event details	Register event	Update registration information	Regular user, Administrator, Organizer
Event Payment Applied	Regular user	Payment information	Apply payment for the event	Verify payment, update payment status	Organizer, Admin, Payment record

# Continuation of the Event Response table

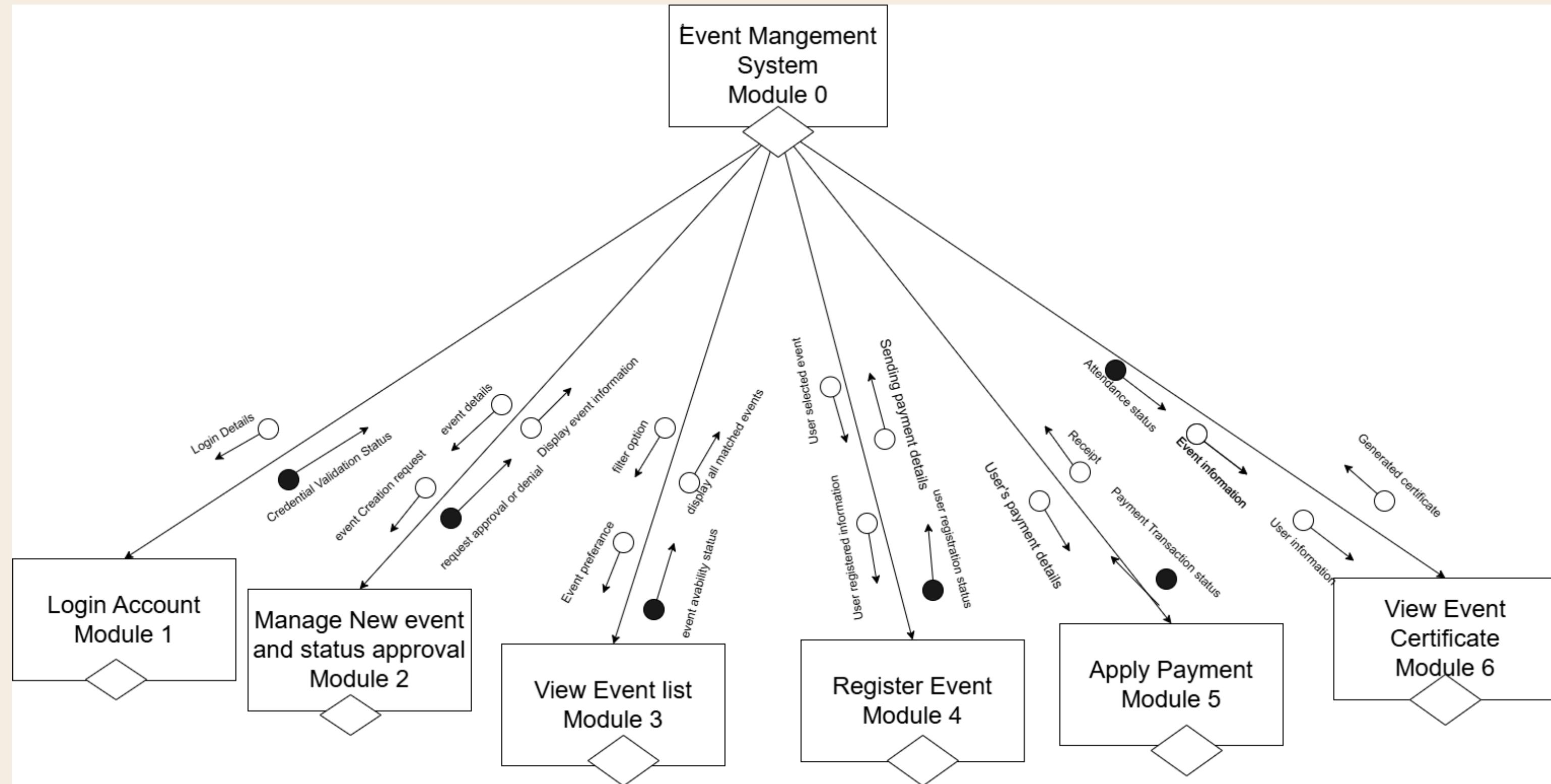
Event	Source	Trigger	Activity	Response	Destination
Event Status Approved	Admin	Event details	Approve or reject event status	Update event status, notify users	Regular user, Organizer, Event Record
View Event List	Regular user, Admin, Organizer	Event details	View event list	Display event list	User interface
View/Update User Profile	Regular user, Admin, Organizer	User details	View user profile	Display user profile	User profile, User Information
Event Notification Sent	Organizer, Admin	Notification requirement	Send notification via notification service	Notification pop up message	Regular user
View Event Certificate	Regular User	Event info, Attendance record	Event Certificate Generated	View the event certificate	Regular User, User Record, Certificate Record
Attendance Recorded	Organizer, Admin	Event details, user details	Manage attendance records	Update attendance records	Event record
Payment Detail Accessed	Regular User, Organizer, Admin	Payment details, user details	View payment details	Display payment details	Payment record

## Structure chart for the Physical DFD design

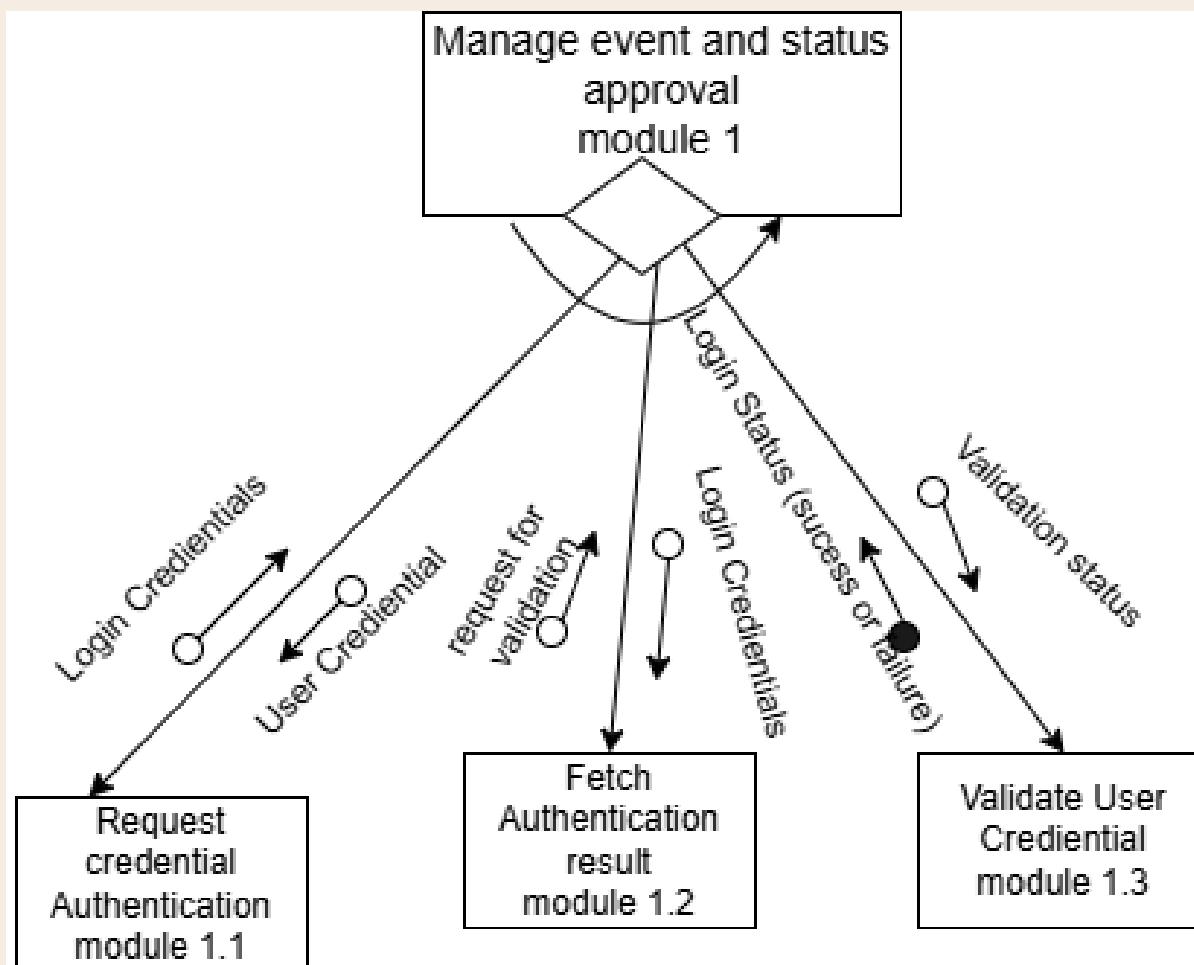
Event response table is A top-down representation of business functions and processes, it shows all the program modules , the relationship between them and the data flow

The next slide shows the Structure chart for Module 0

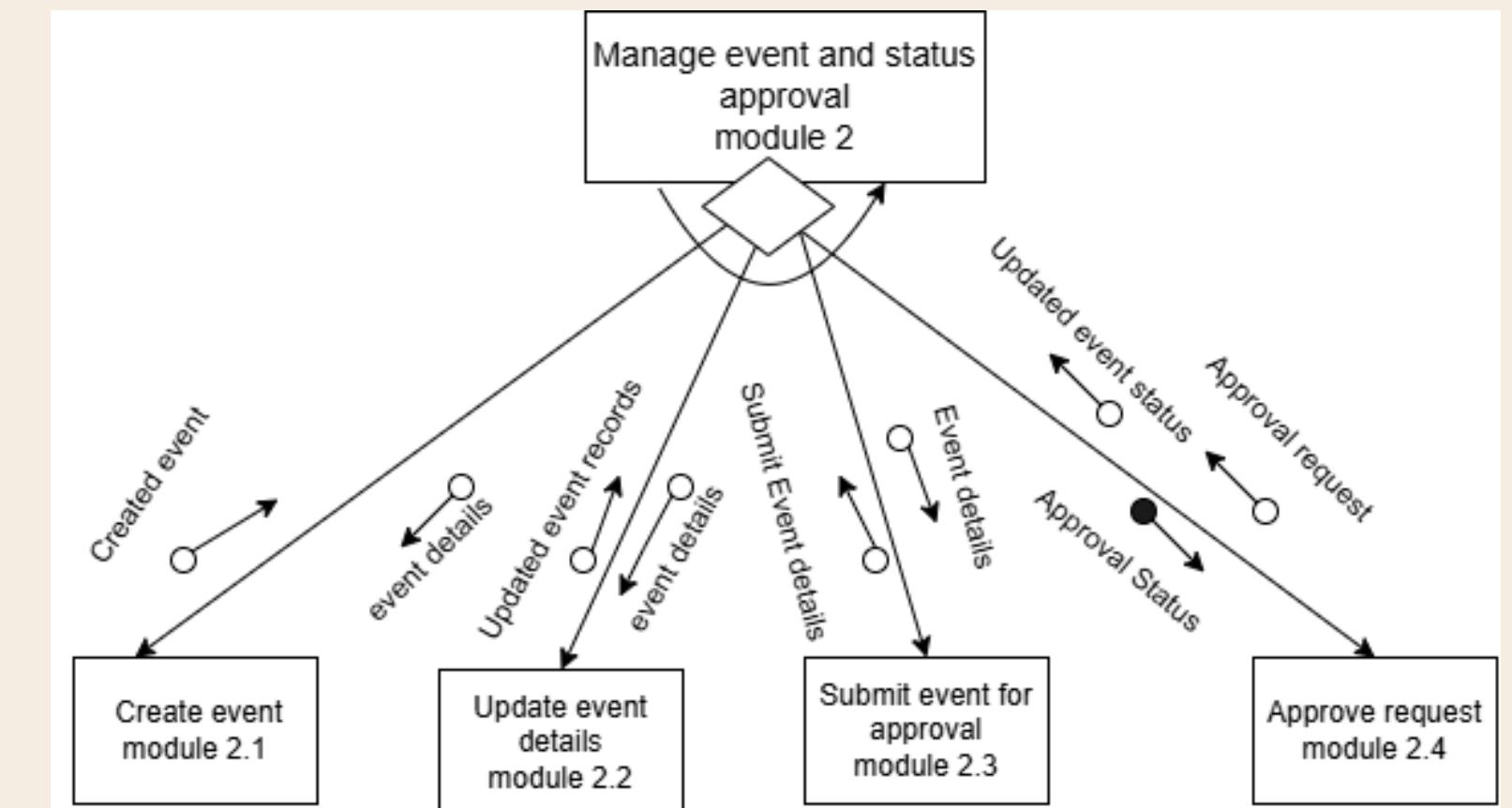
## Structure chart : Module 0



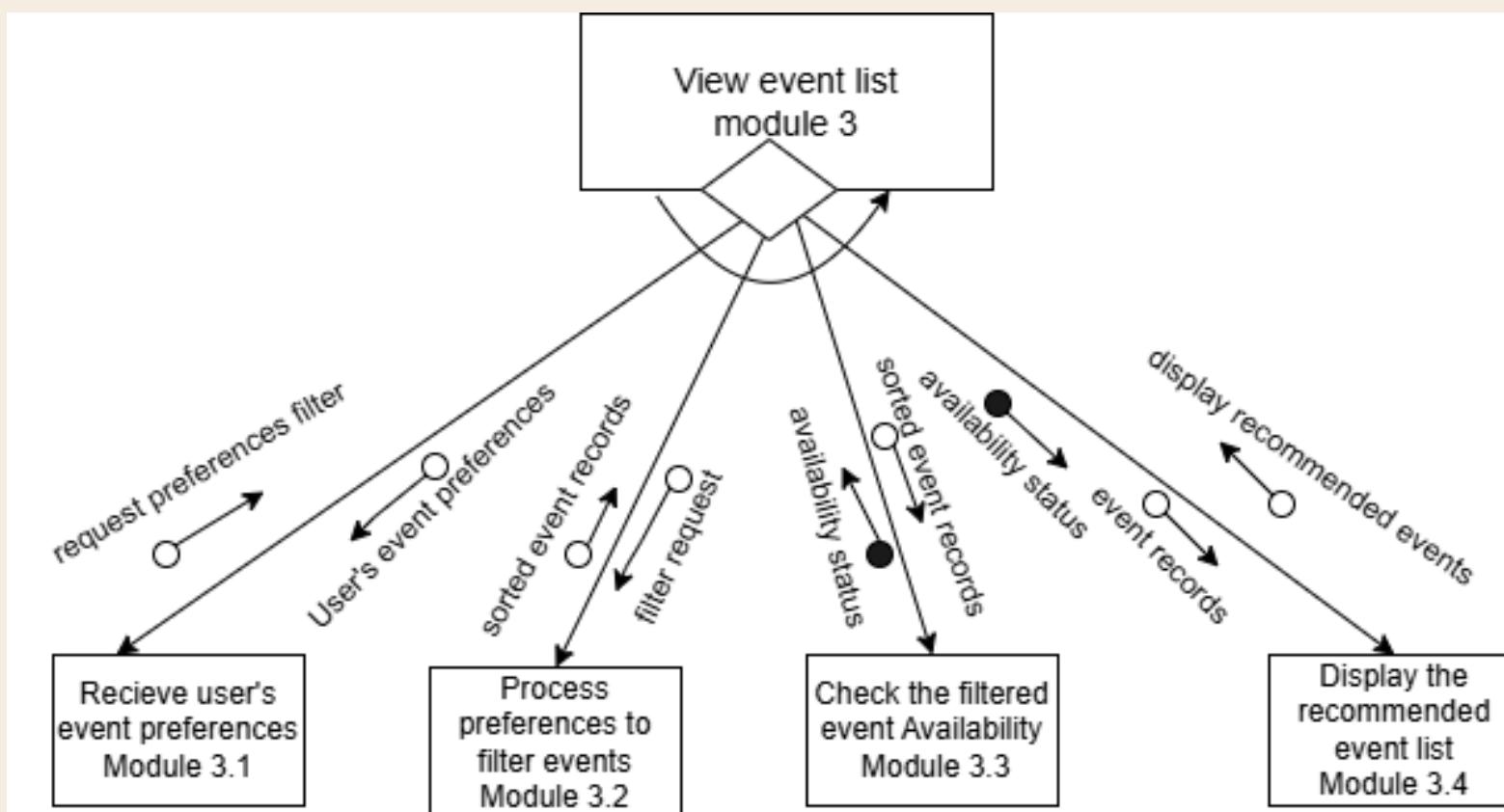
## Structure chart : Module 1



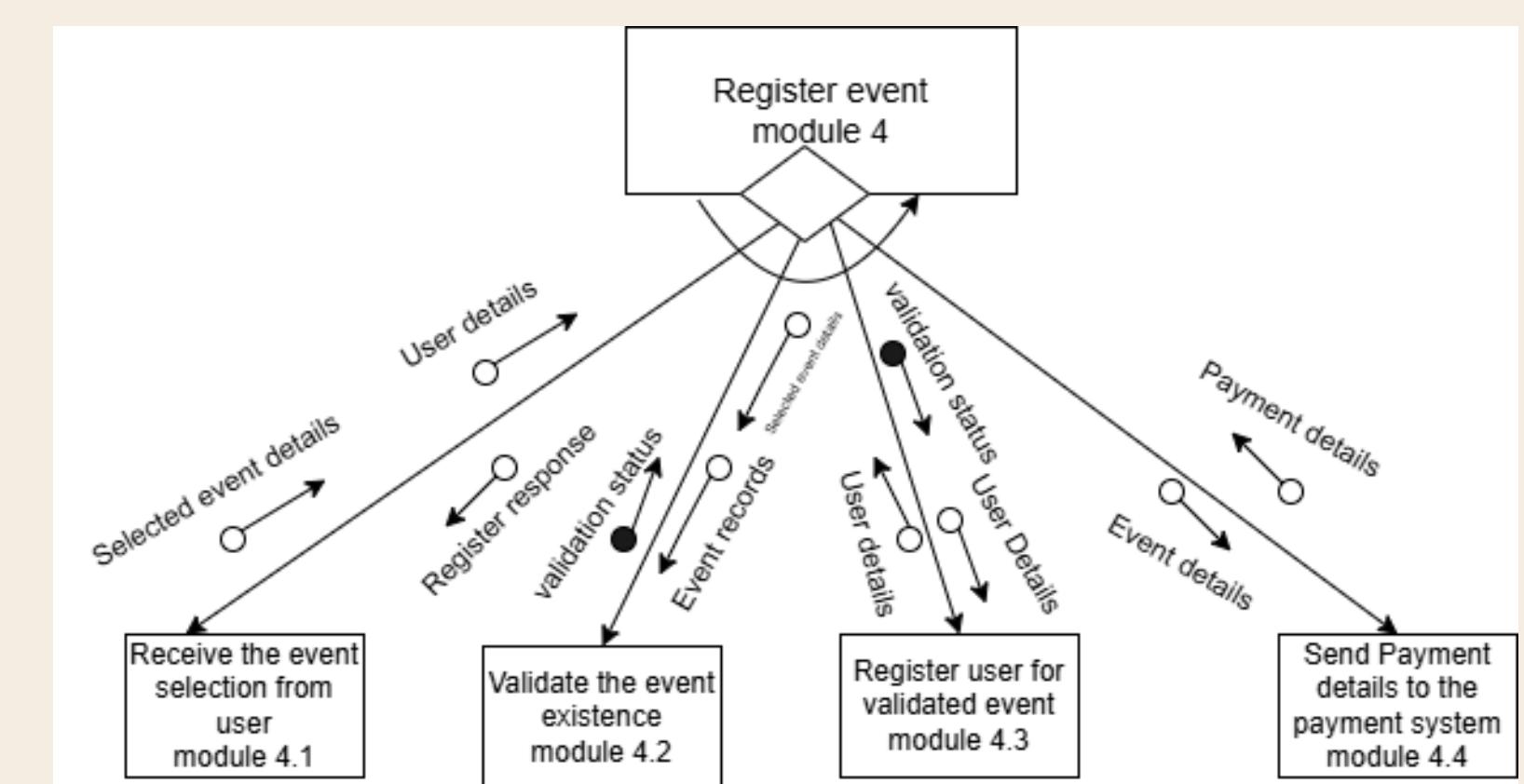
## Structure chart : Module 2



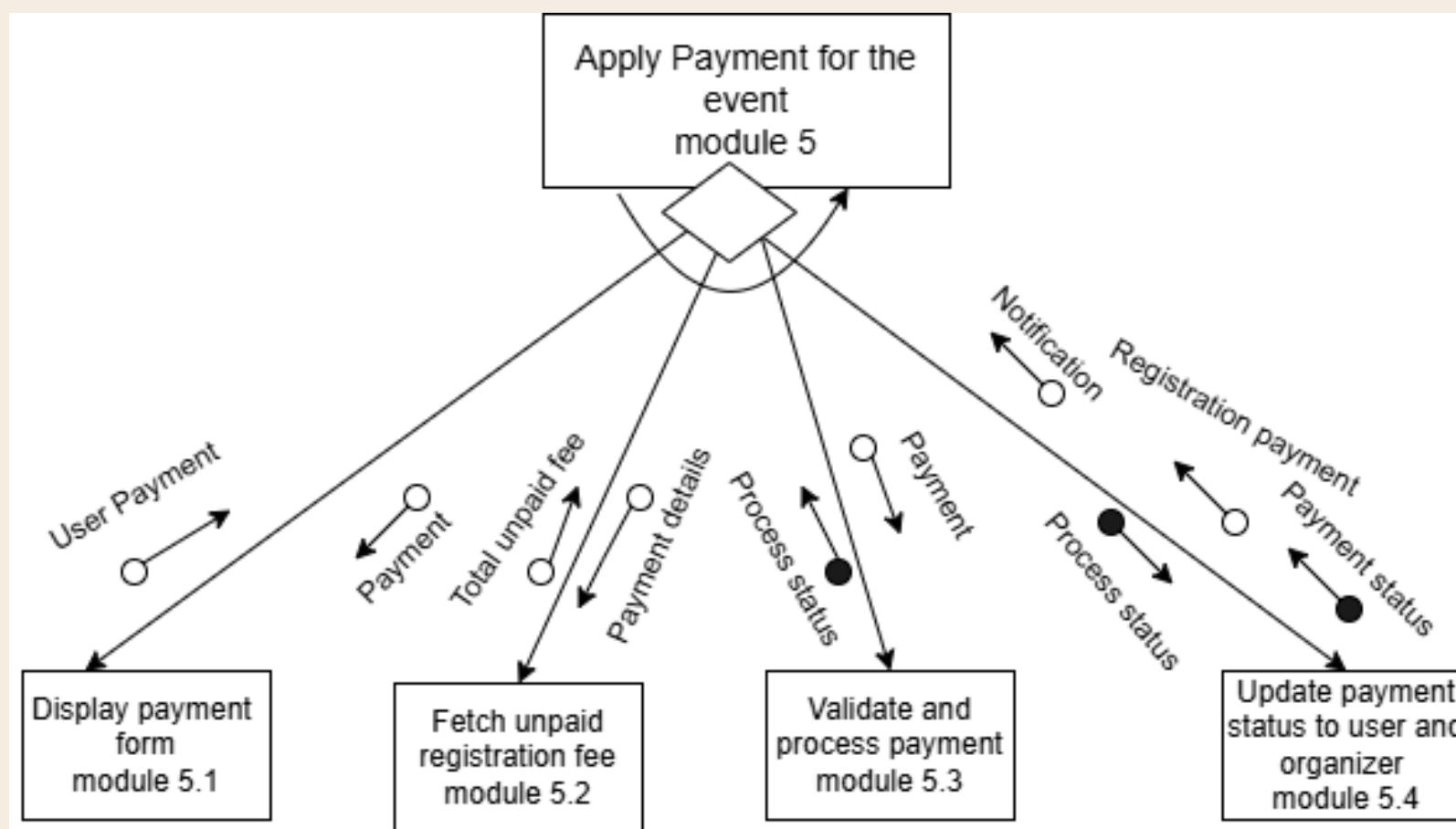
## Structure chart : Module 3



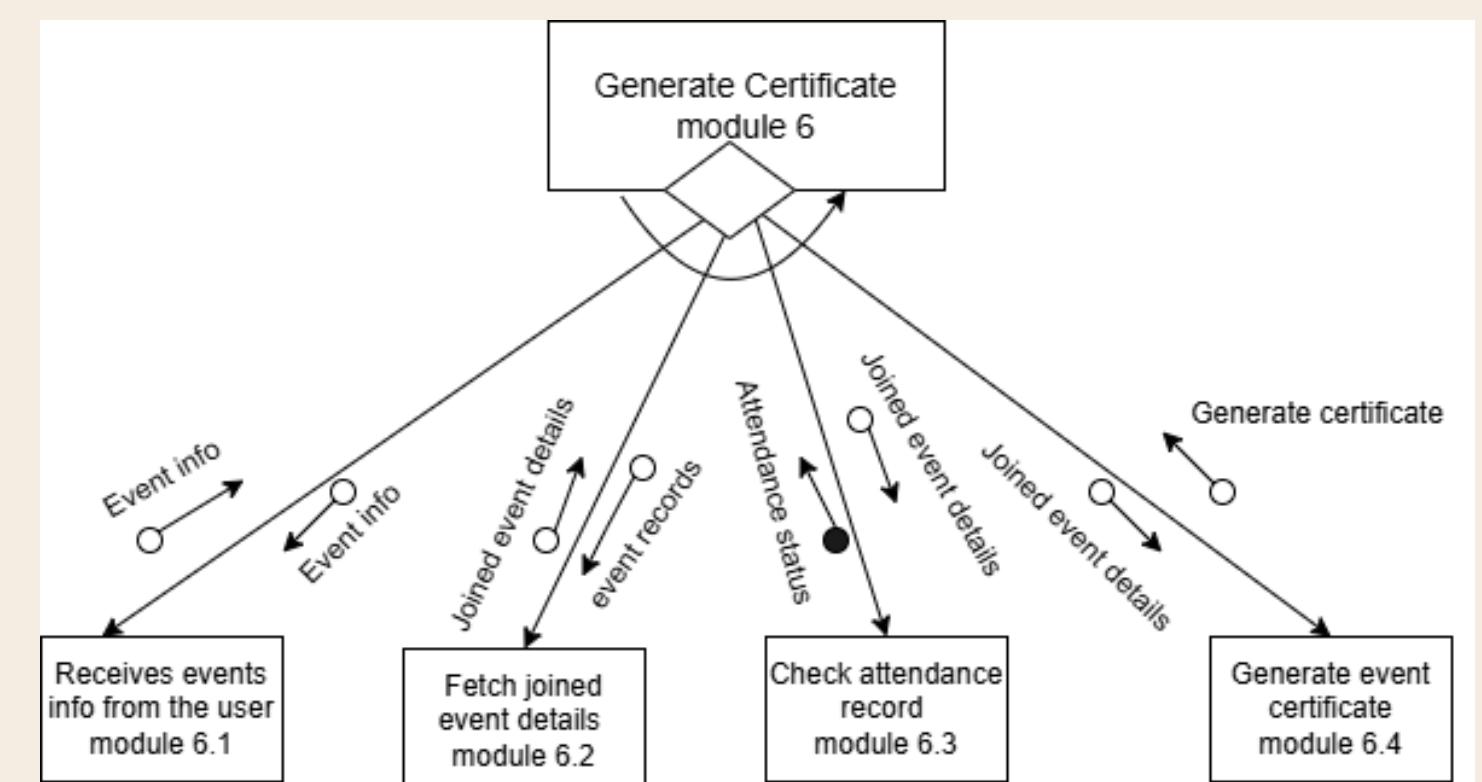
## Structure chart : Module 4



## Structure chart : Module 5



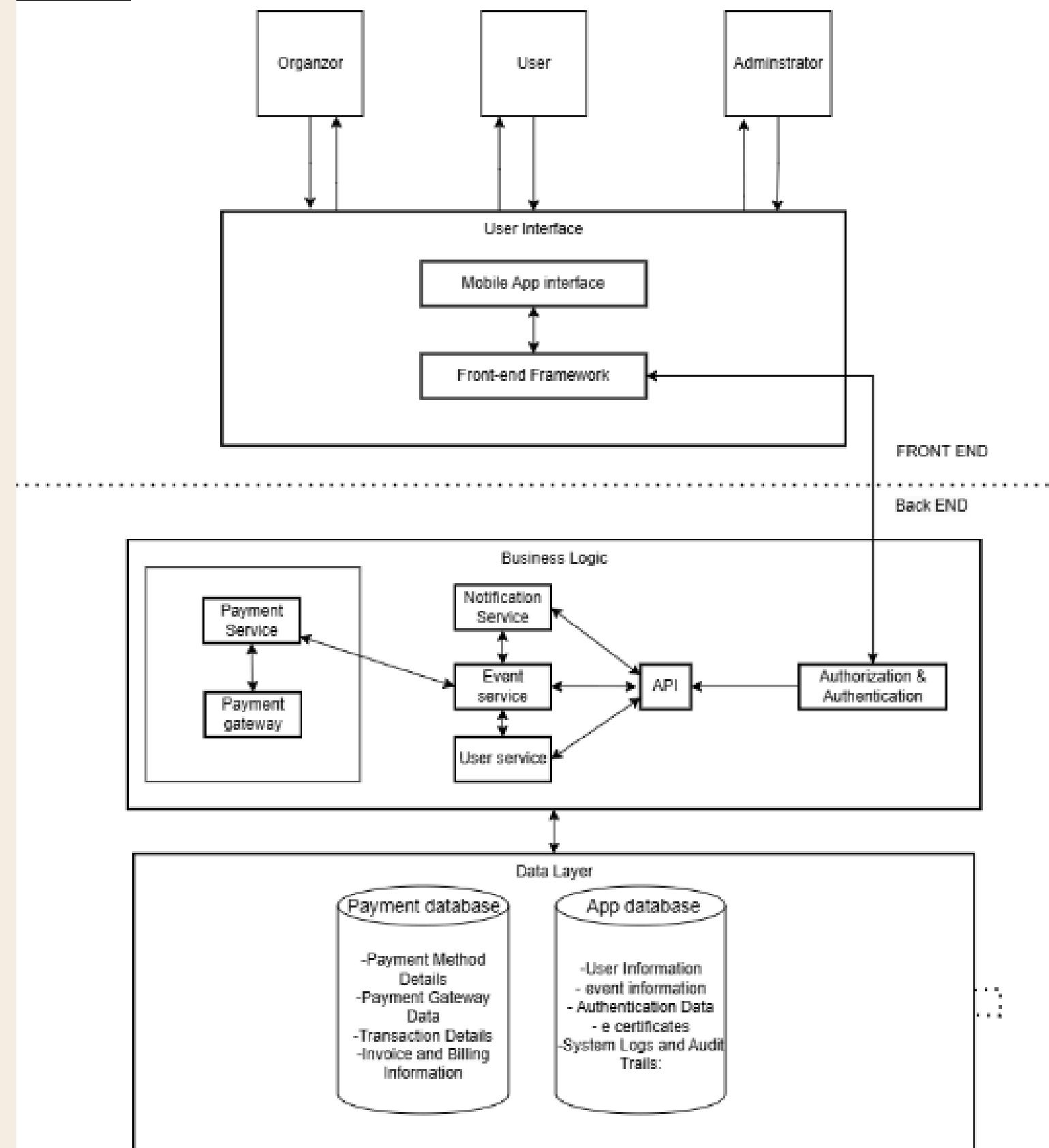
## Structure chart : Module 6



# System Architecture :

- **Consists of 3 layers : User , Bussines logic , and data**

chitecture



# ARCHITECTURE BREAKDOWN

## Front End

- **User Interface (UI):**

Mobile App interface for various user roles (Organizer, User, Administrator).

- Login page
- Home page
- Interactive interface
- Event registration page
- Event creation page
- Certificate generation page
- Easy navigation

- **Frontend Framework**

Serves as the bridge between UI and backend services

Making use Flutter as a frame work for front end

1

## Back end

- **Application Layer:**

processing and managing the business logic of the application.

- Authorization
- Authentication
- Web server
- API

and

- **Data Layer:**

Store structured data in a persistent and queryable form

- Databases (Payment records and Event & User records)
- Cache for performance optimization

2

# ARCHITECTURE BREAKDOWN

## Type/Size of Computer

- **Cloud-Based Servers:**

Use scalable instances for flexibility

- **Server Specifications:**

- **RAM:** 16GB to 32GB
- **Storage:** 1 tb SSD storage

3

## Networking and Communication

- **Web-Based System:**

- Relies on internet communication.

- **Content Delivery Network (CDN):**

- Use CDNs for fast content delivery.

- **Security Measures:**

- Implement firewalls for system protection

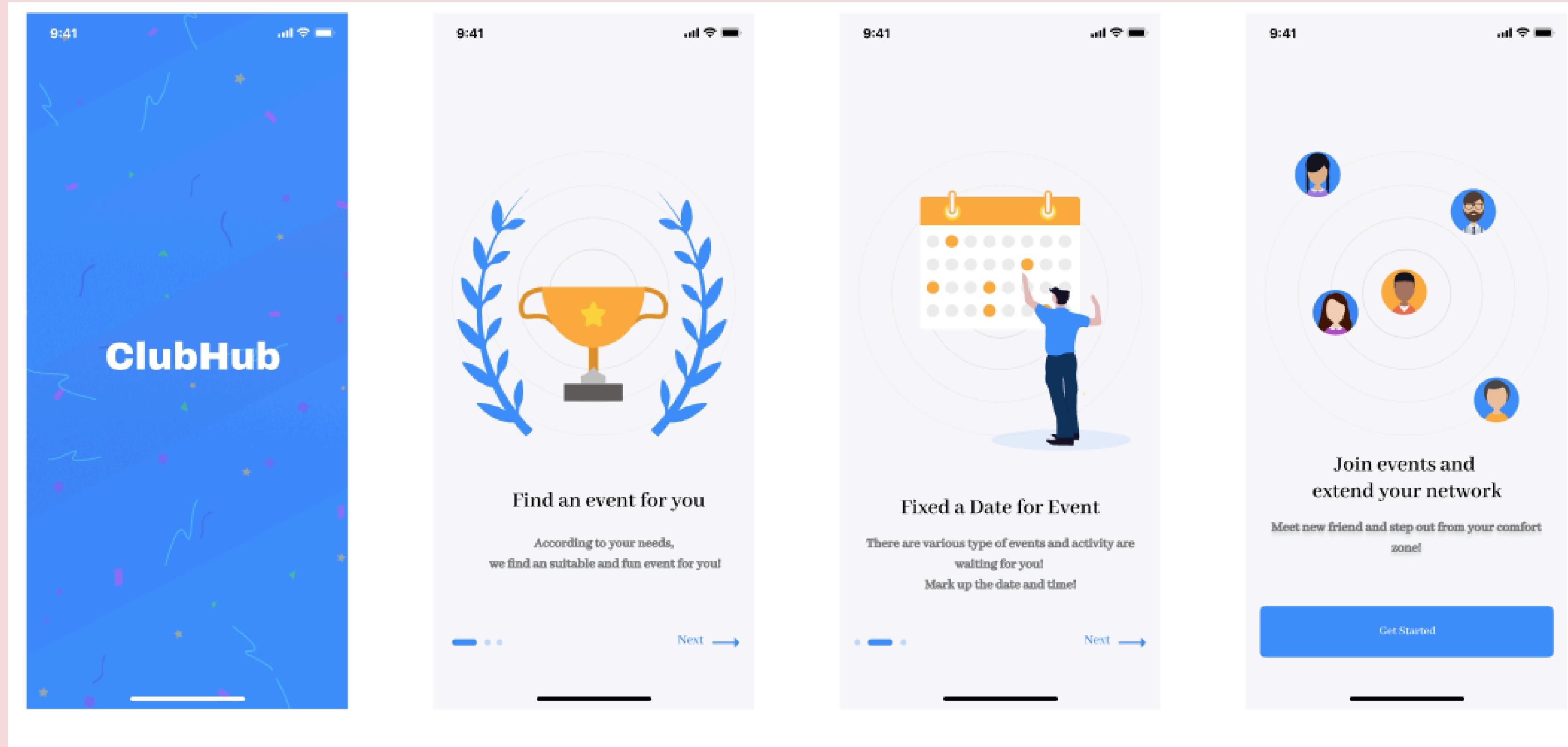
4



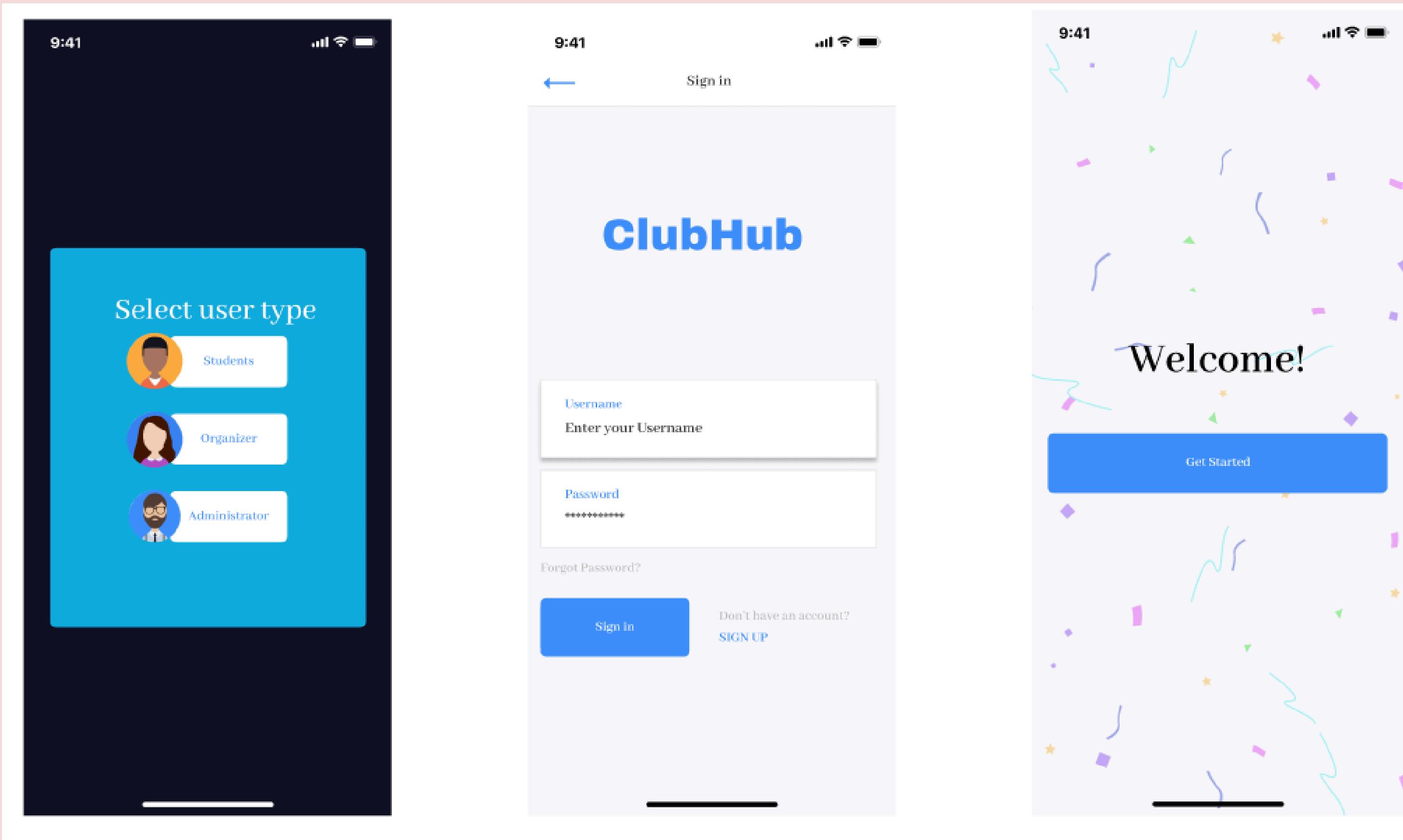
# PROTOTYPE

04

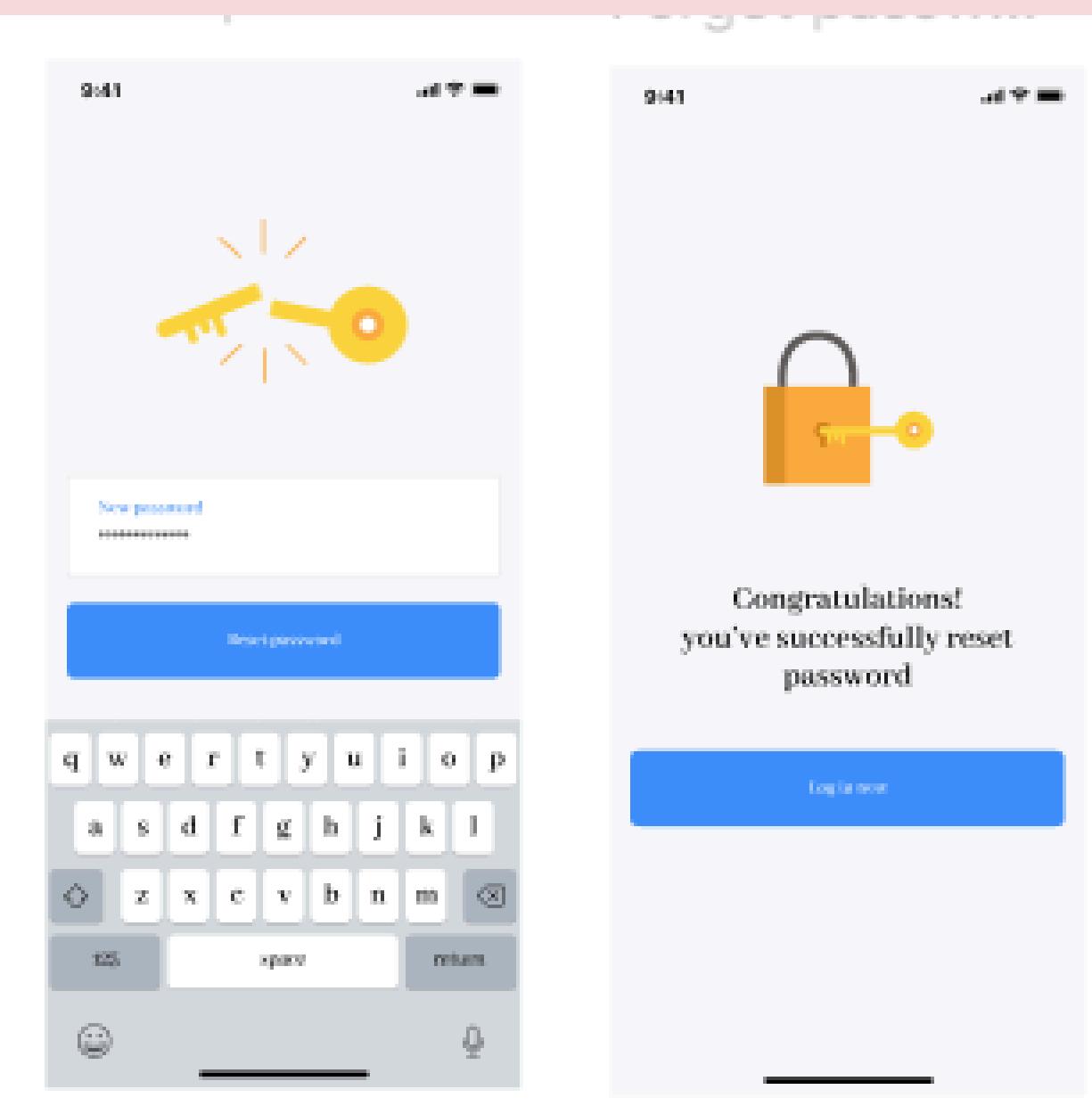
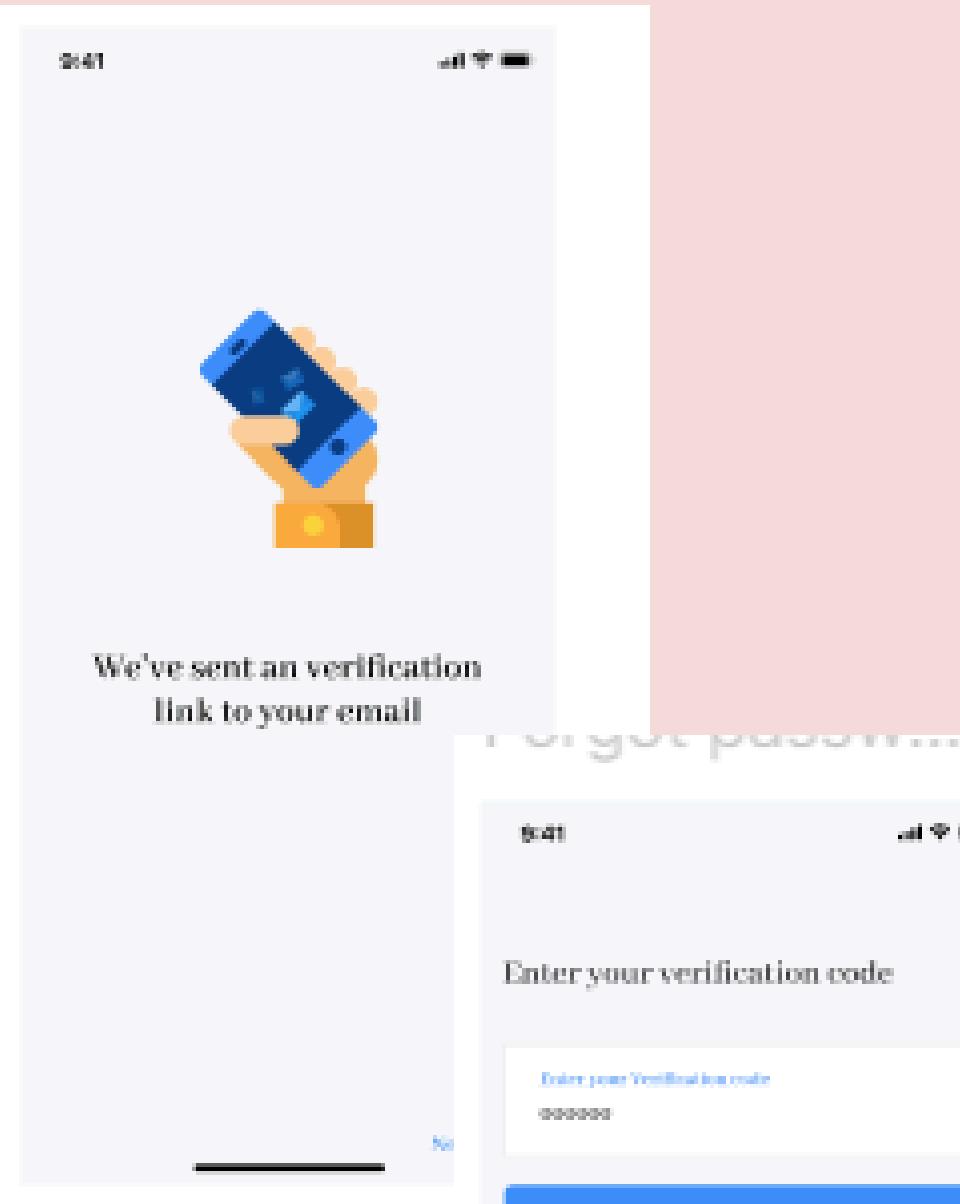
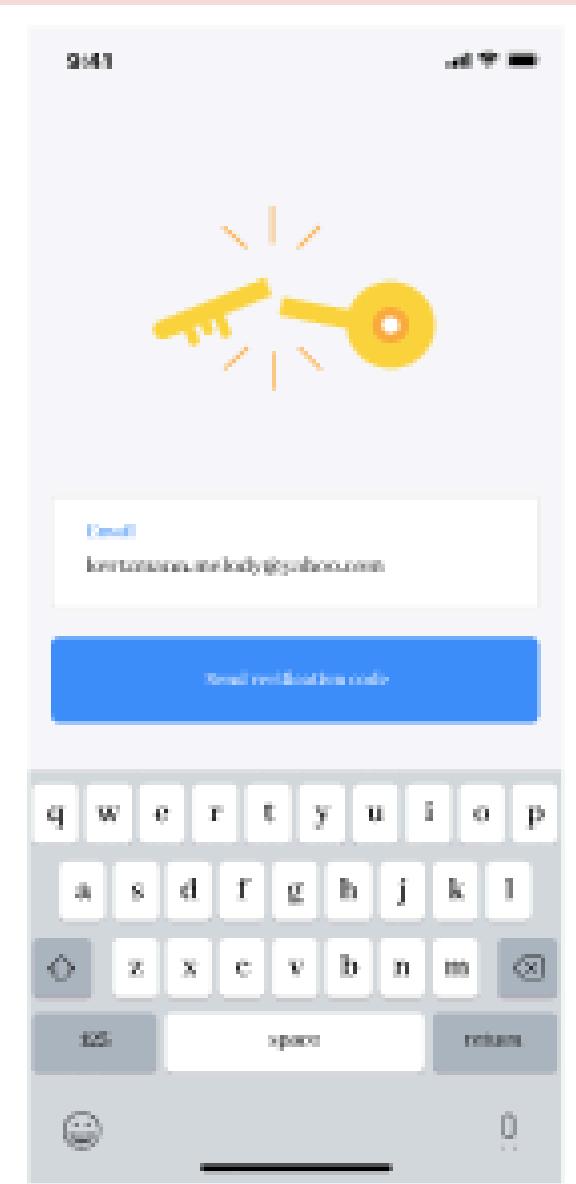
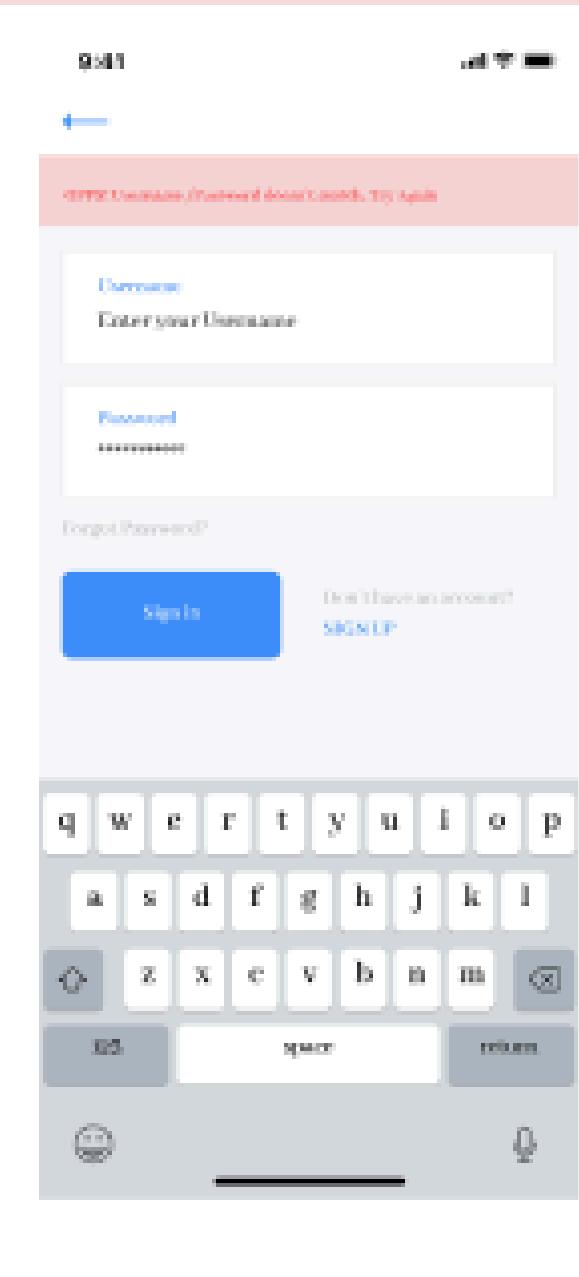
# Login System



Application interface

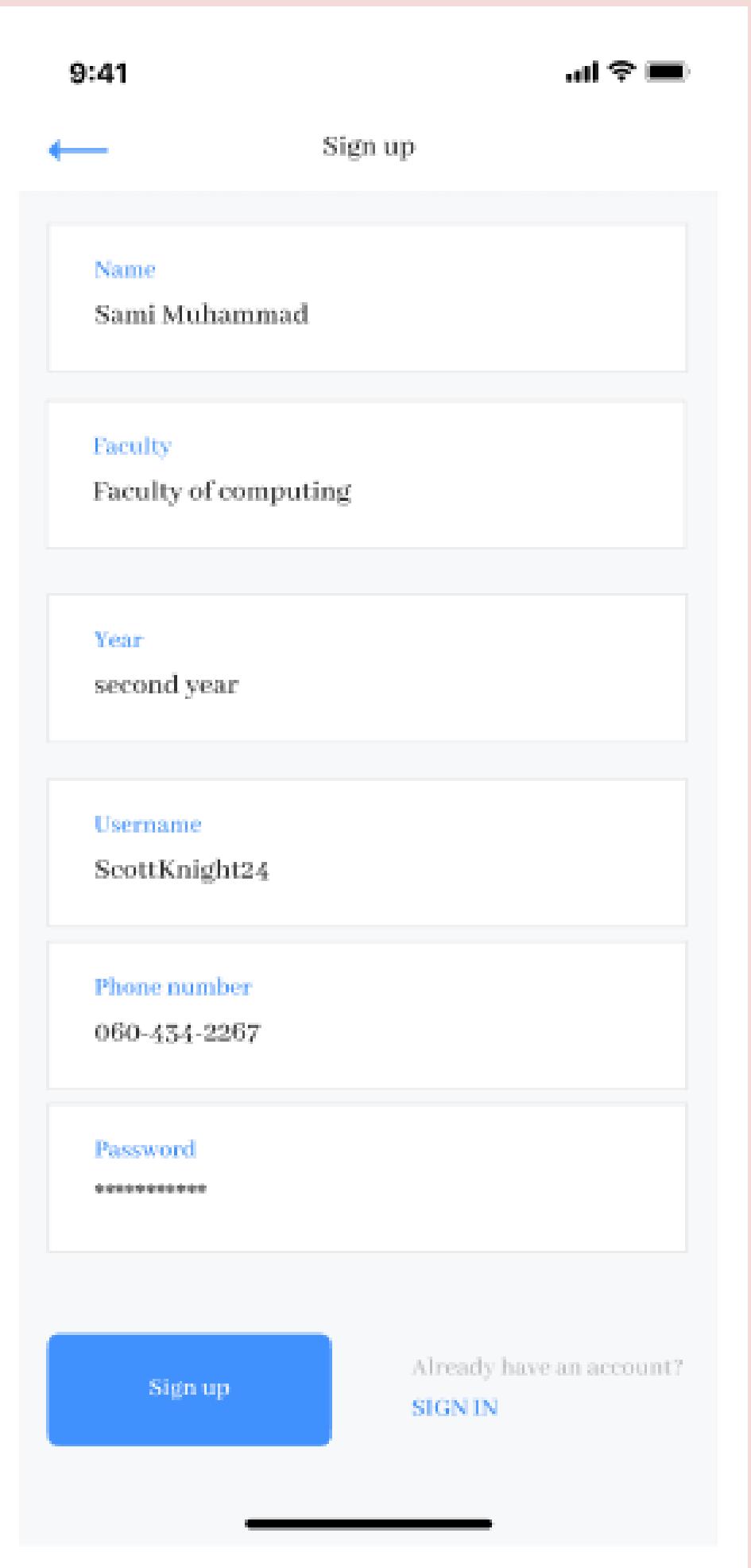


Selecting the type of user and sign in

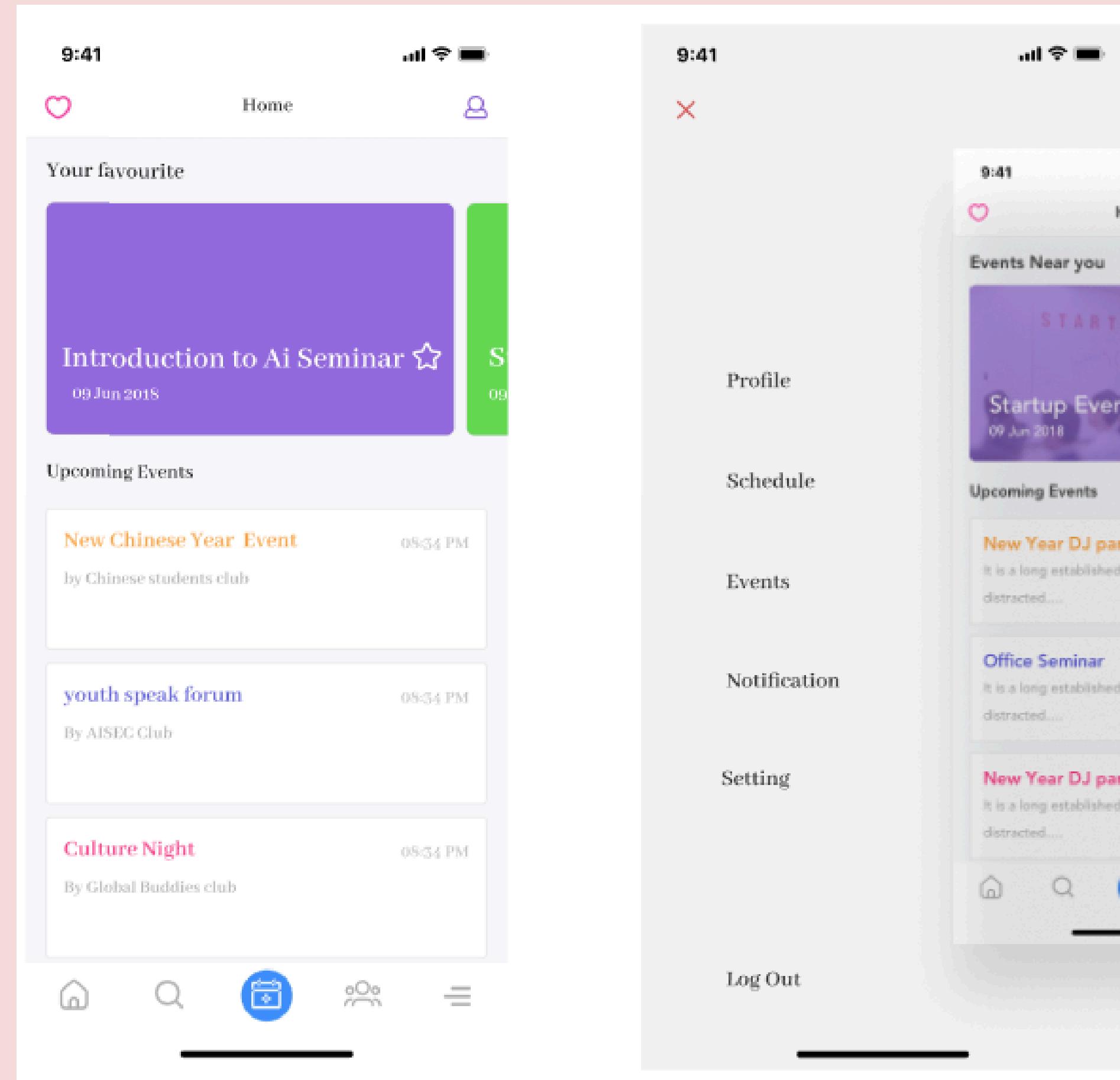


# Reset password if login failure

## Sign up interface



## Home page for regular user



Home page and navigation bar for regular user (student)

The image displays three screenshots of a mobile application interface, likely for event management or social networking.

**Notifications Screen:** Shows a list of notifications. The first notification is from "AISESEC club" about a new event, posted 2 minutes ago. The second notification is about an accepted request to join an "New Year DJ party @ Malaysia" event, posted 21 April. The third notification is a follow request from "Persaka club".

**User Profile Screen:** Displays the profile of a user named "Sami Muhammad" (@ScottKnight24). It includes a profile picture, a camera icon, a list icon, and a share icon. Below the profile picture is a large gray placeholder area.

**Favourites Screen:** Shows a list of favorite events. The first event is "Startup Event" (09 Jun 2018), marked with a purple star. The second event is "Dj party" (09 Jun 2018), marked with an orange star. The third event is "Training & Seminars" (09 Jun 2018), marked with a green star. Each event card has a search bar at the top.

Notification, user profile and user favorites interface

9:41

Profile

Sami Muhammad  
@ScottKnight24

Certificates

Sport 32 events

Corporate Events 10 events

Training & Seminars 60 events

Faculty Events 7 events

9:41

Profile

Sport

#MARATHON UTM '24 CERT 12 May 2024

#Badminton Match KTHO CERT 28 May 2024

#Resak Run 2024 CERT 7 June 2024

#Volleyball Tournament CERT 12 June 2024

9:41

Certificate Details

MARATHON

Awarded To \_\_\_\_\_

Awarded On \_\_\_\_\_ At \_\_\_\_\_

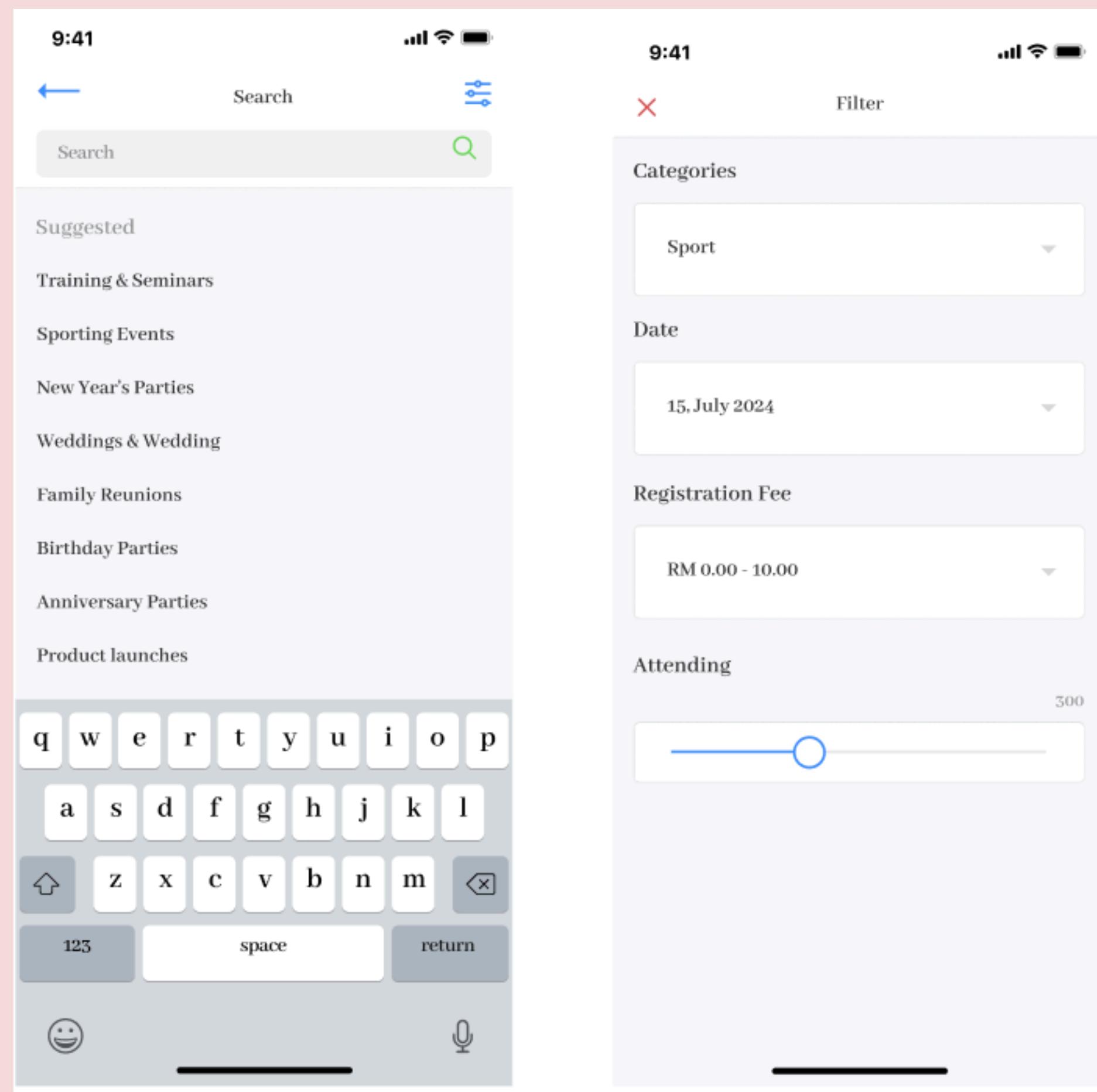
Name \_\_\_\_\_ Name \_\_\_\_\_

www.FreePrintableCertificates.net

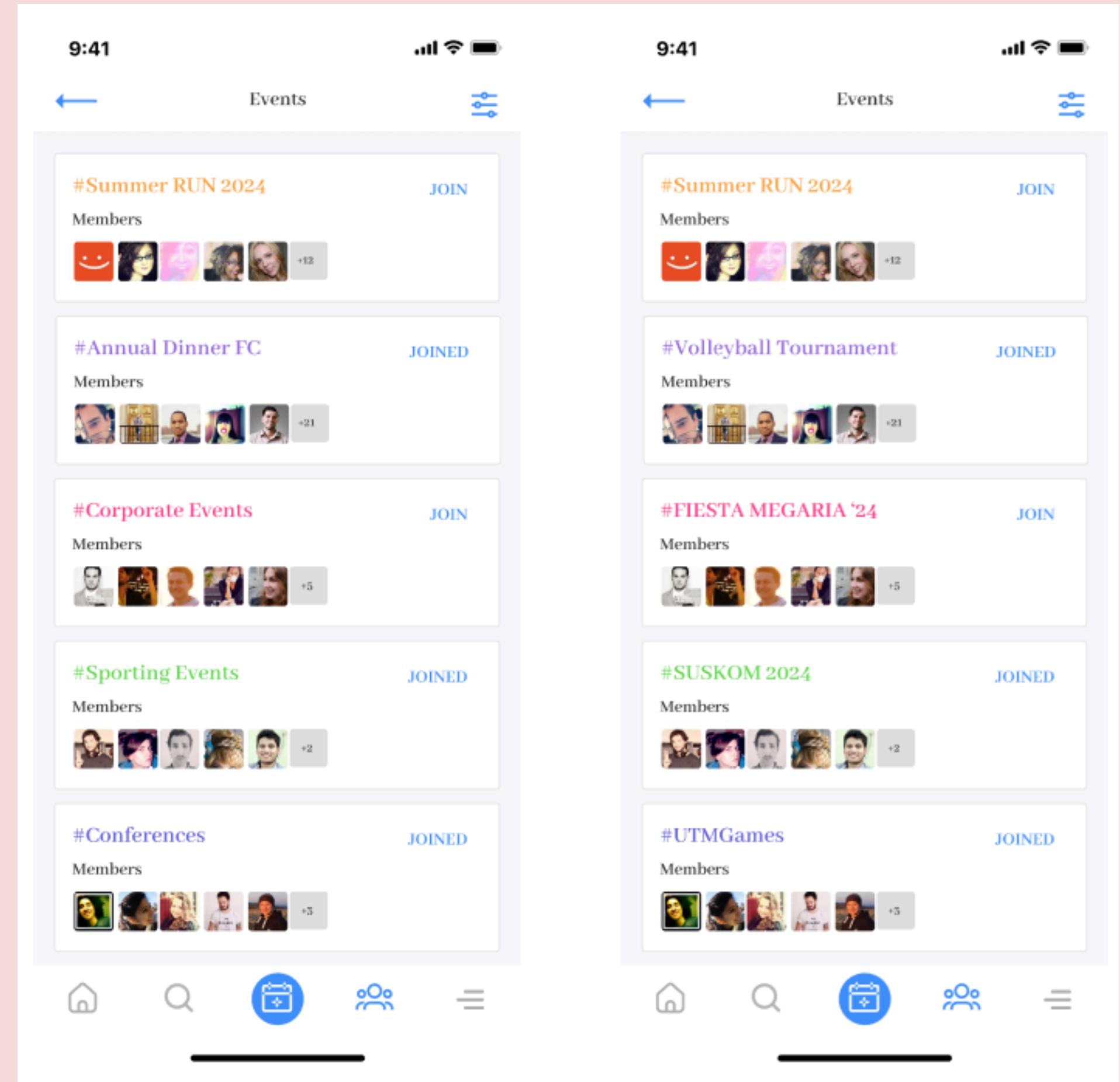
Download

Event certificates in user profile

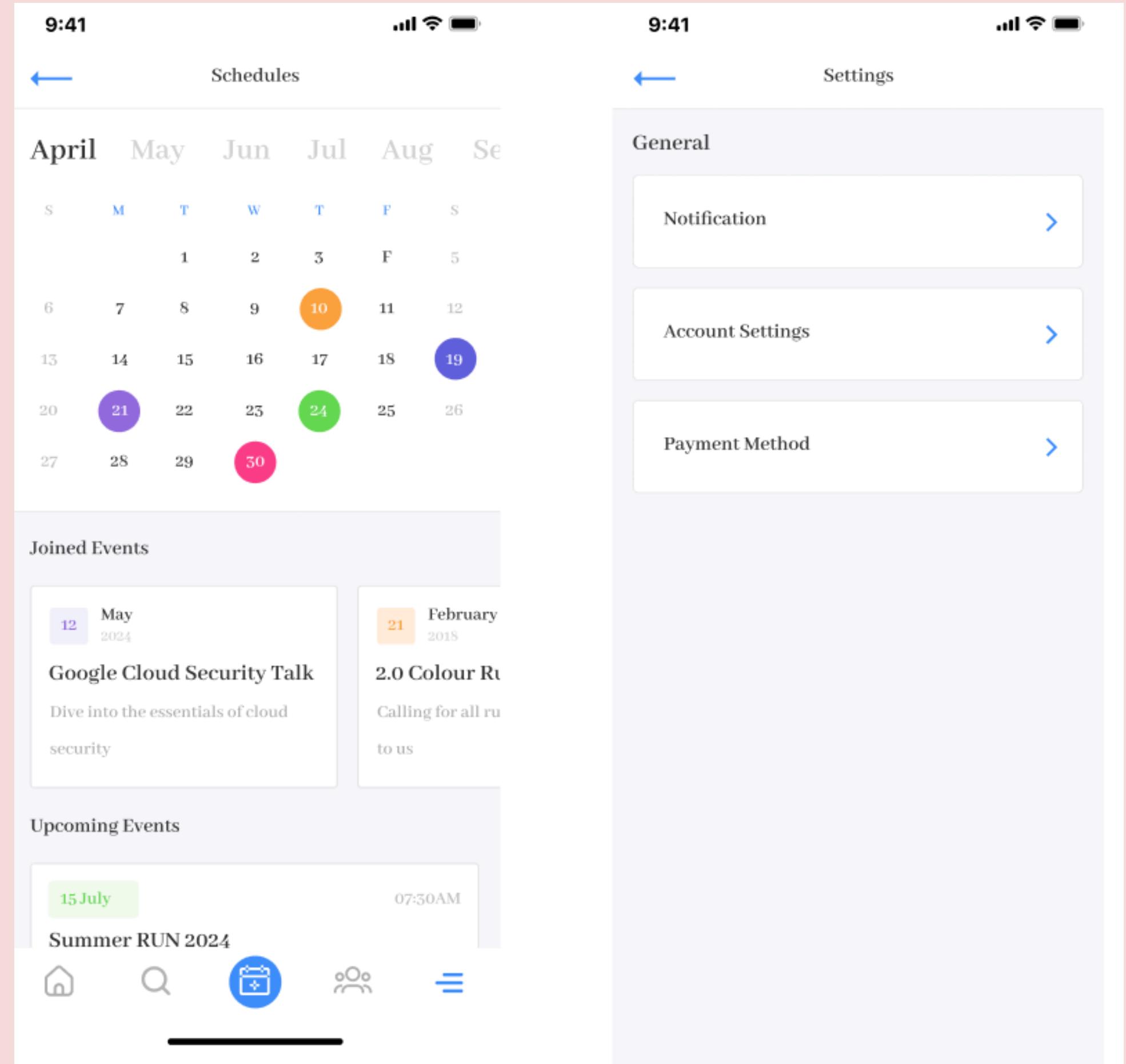
## Event navigation



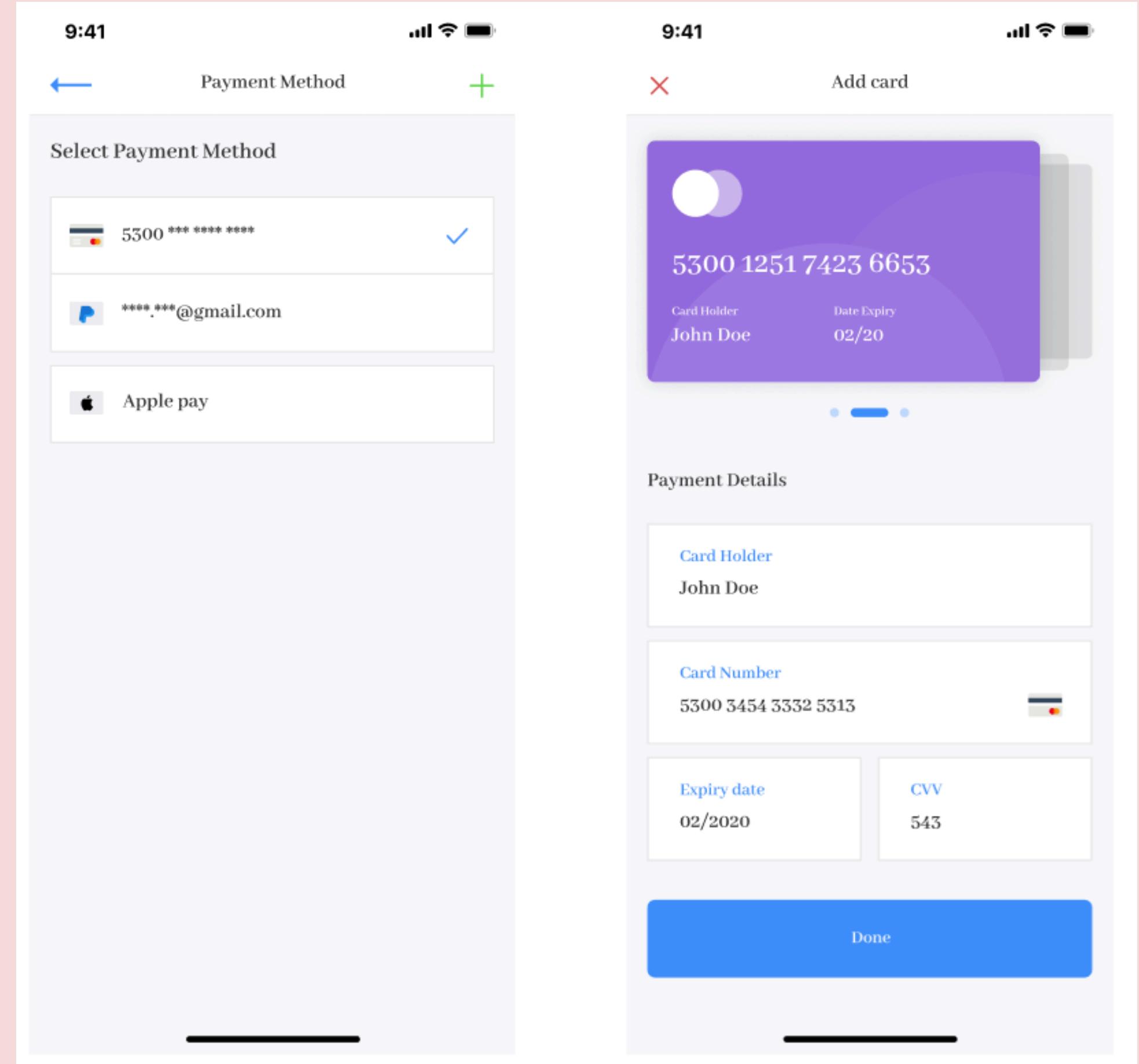
Event navigation and filter searching



Event before filter and event results filtered



Schedules and Setting interface



Payment setting interface

# Event registration

9:41 all WiFi

Summer RUN 2024

7 events

Event title

Summer RUN 2024

Sun, 13 July 07:30 AM RM 5.00

About

We care about your health! Try 5km run in UTM.  
Feel the fresh air to energize your day.

Organized by

 Sport Club [Follow](#)

Location

  
N24, UTM

People attending

 +6  
More people are attending

Contact

473-466-1548  
[takin\\_gavin@yahoo.com](mailto:takin_gavin@yahoo.com)

Events Near you

  
Startup Event   
20 Jun 2018 S  
B

[Attend](#)

9:41

Events route

July  
15  
2024

Summer RUN 2024

We care about your health! Try 5km run in UTM  
Feel the fresh air to energize your day

9:41

Registration details

## Summer RUN 2024

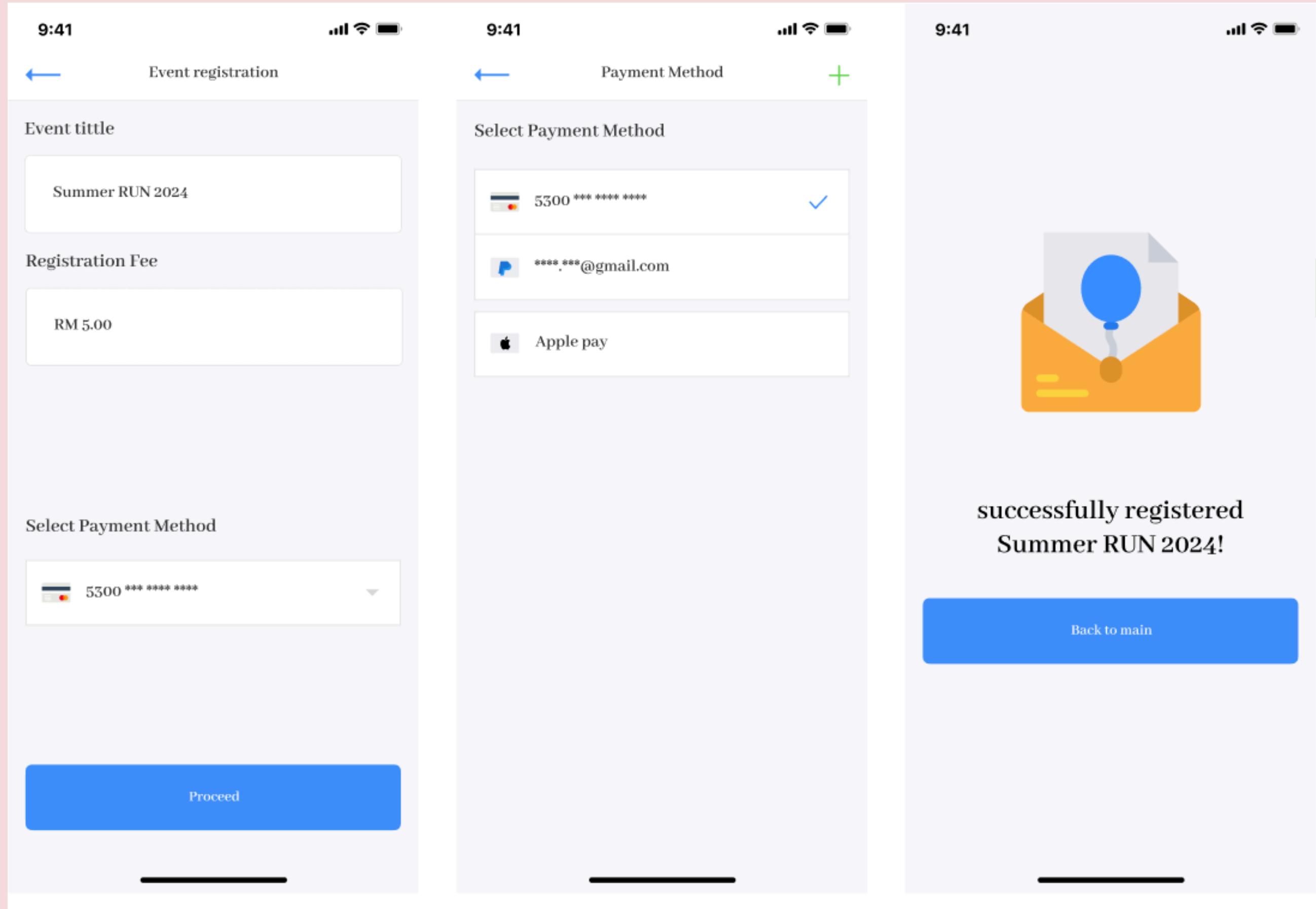
We care about your health! Try 5km run in UTM  
Feel the fresh air to energize your day

Name	Alexis Venue
Event title	<b>Summer RUN 2024</b>
Date	<b>15 July 2024</b>
Start	<b>07:30AM</b>
End	<b>12:00PM</b>
Venue	<b>N24, UTM</b>
Registration number	<b>#445325654</b>

Total Registration Fee **RM5.00**

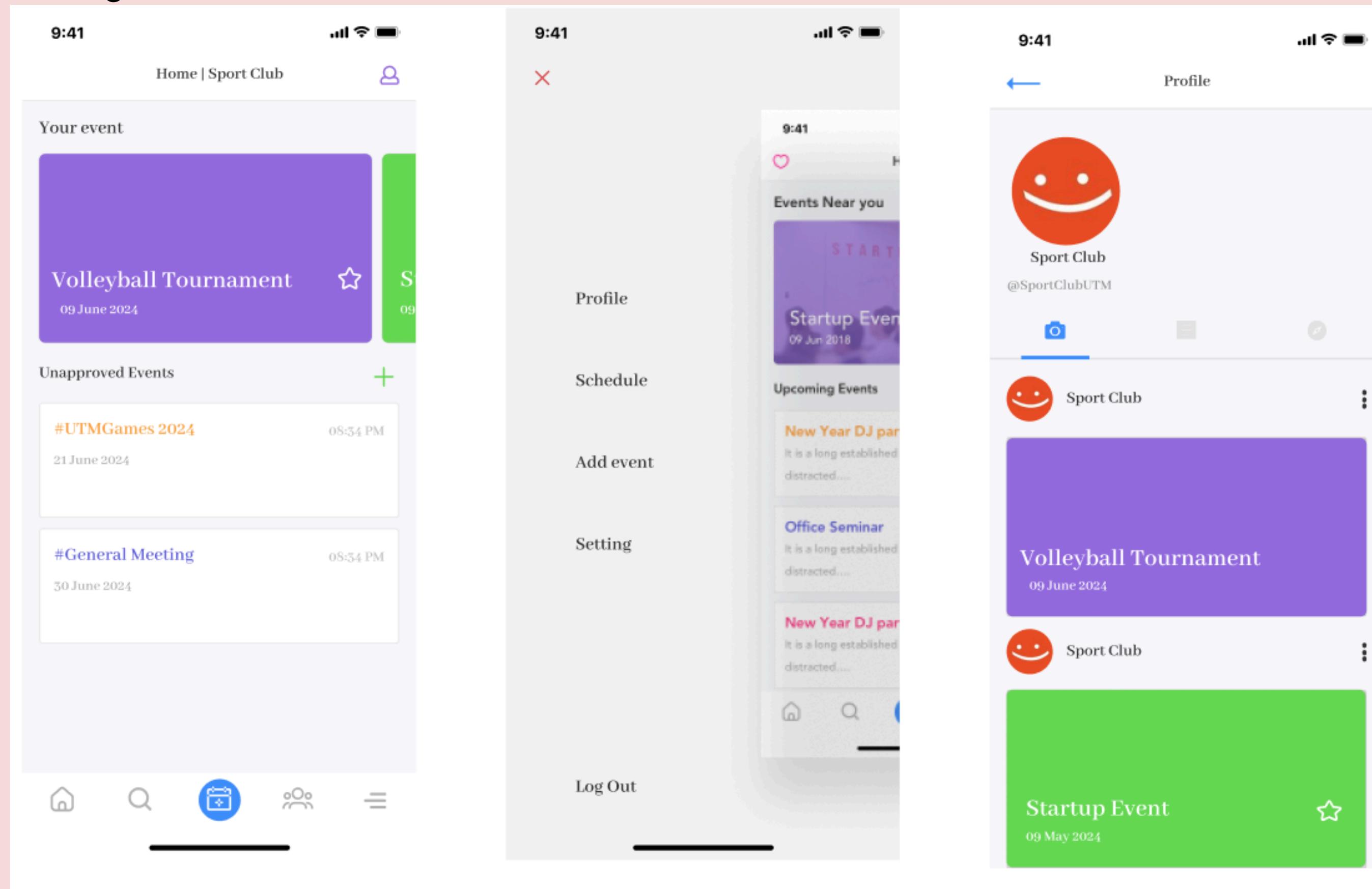
**Make payment**

Event route and registration details



Payment for event registration and interface successful registration

# Home page for organizer



Home page, navigation bar and profile for organizer

# Event registration for organizer

The screenshots show a mobile application for managing events, likely for an organizer.

**Screenshot 1: Add Events - Step 1/2**

- Title:** Summer RUN 2024
- Date:** 15 July 2024
- Place:** N24, UTM
- Time:** 07:30 AM

A blue "Next" button is at the bottom right of the screen, and a keyboard is visible at the bottom.

**Screenshot 2: Add Events - Step 2/2**

- About:** Summer RUN 2024!  
Come to join us at N24 UTM!
- People attending:** A grid of six small profile pictures, with a "+6" button to add more.
- Contact:**
  - Phone number: 011-XXX XXXX
  - Email: hegmann.johnathon@hotmail.com

A blue "Done" button is at the bottom right of the screen, and a keyboard is visible at the bottom.

**Screenshot 3: Home | Computing CLub**

- Your event:** Volleyball Tournament (star icon, 09 June 2024)
- Unapproved Events:**
  - #UTMGames 2024 (08:54 PM, 21 June 2024)
  - #General Meeting (08:54 PM, 30 June 2024)
  - #Summer RUN 2024 (07:50 AM, 15 July 2024)

At the bottom, there are icons for Home, Search, Calendar (highlighted), People, and More.

9:41

Summer RUN 2024

7 events

Event title

Summer RUN 2024

Sun, 15 July 07:30AM

About

We care about your health! Try 5km run in UTM  
Feel the fresh air to energize your day

Organized by

 Sport Club

Location

N24, UTM

People attending

     +6

More people are attending

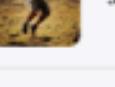
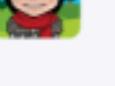
Contact

473-465-1548

lakin\_gavin@yahoo.com

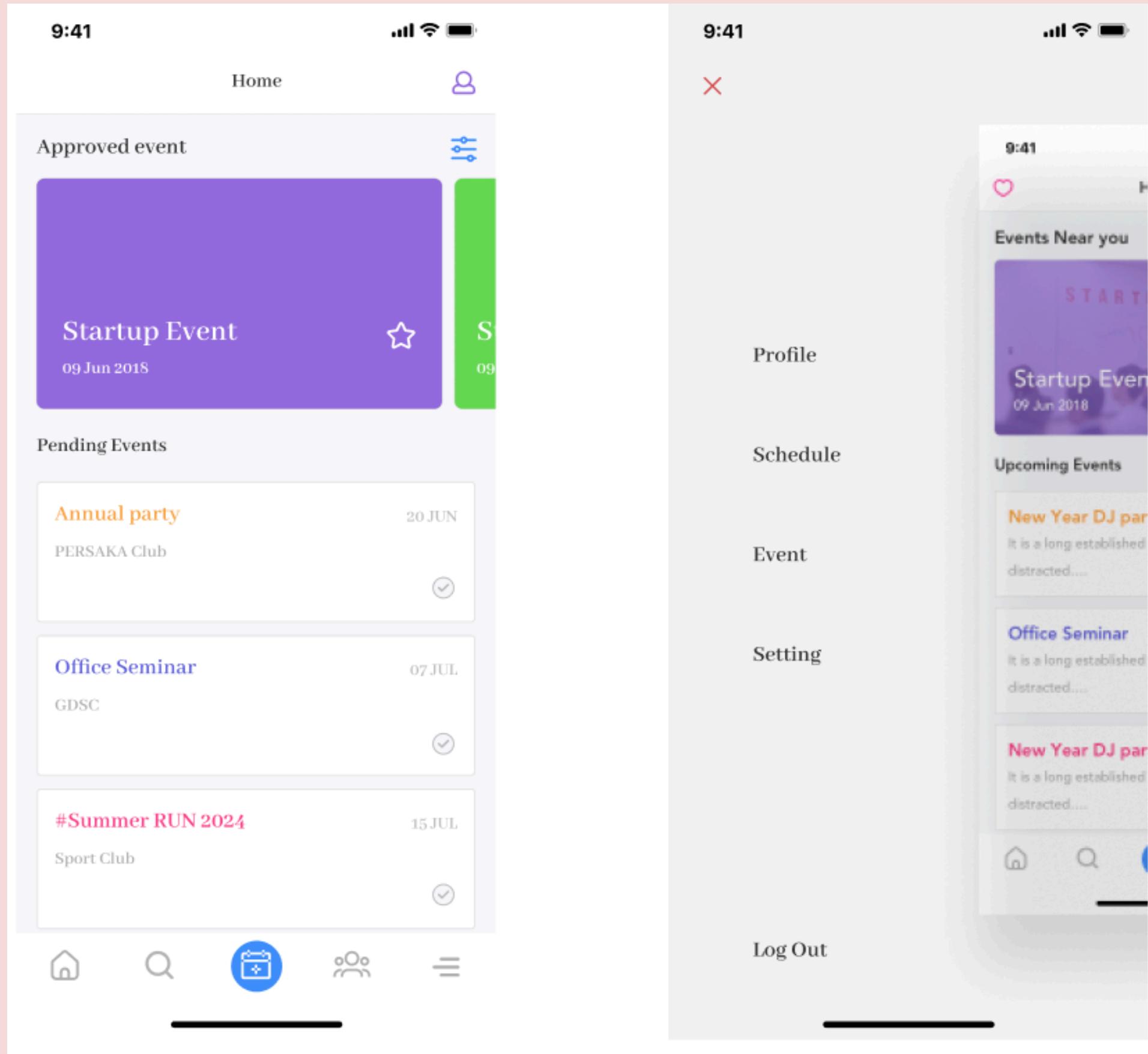
9:41

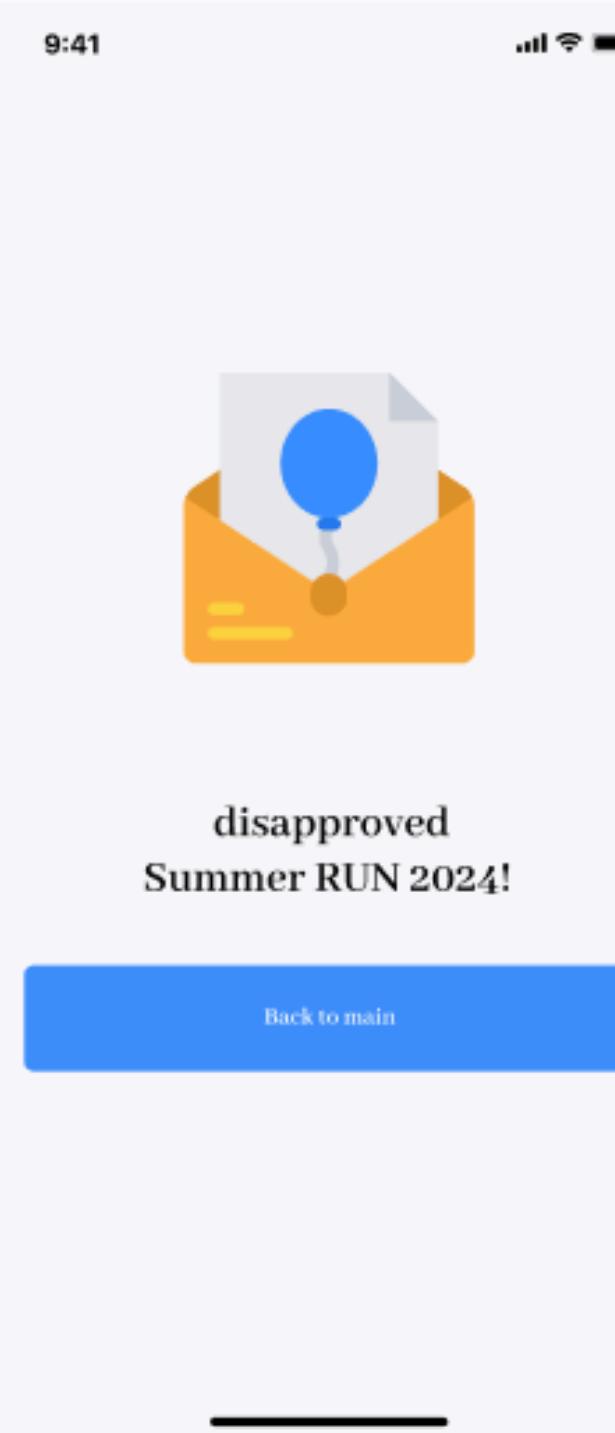
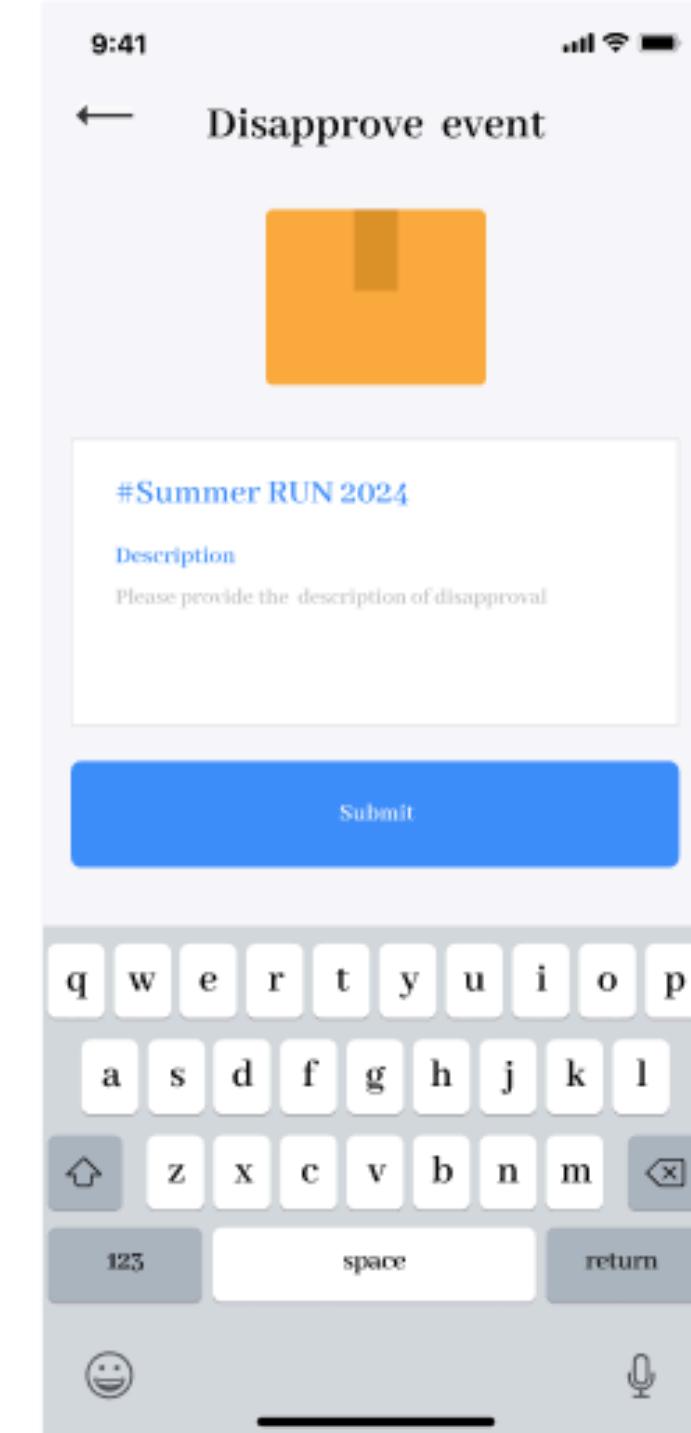
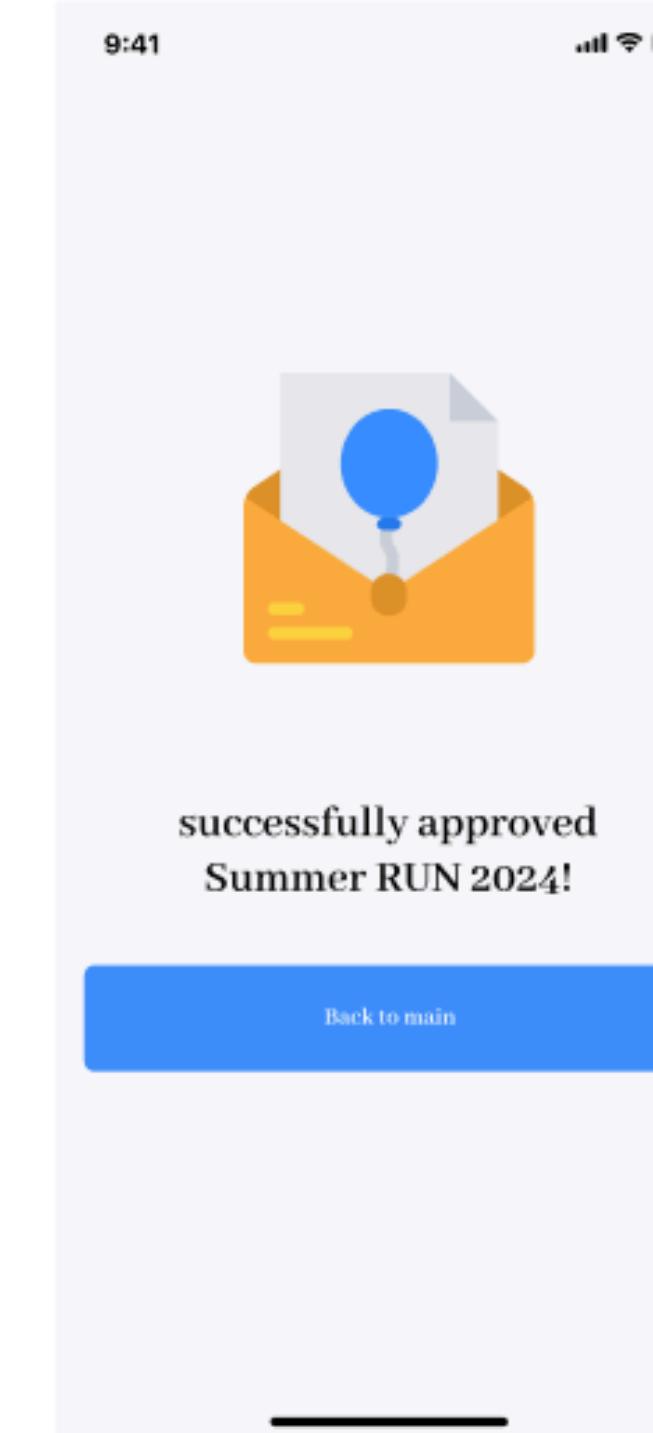
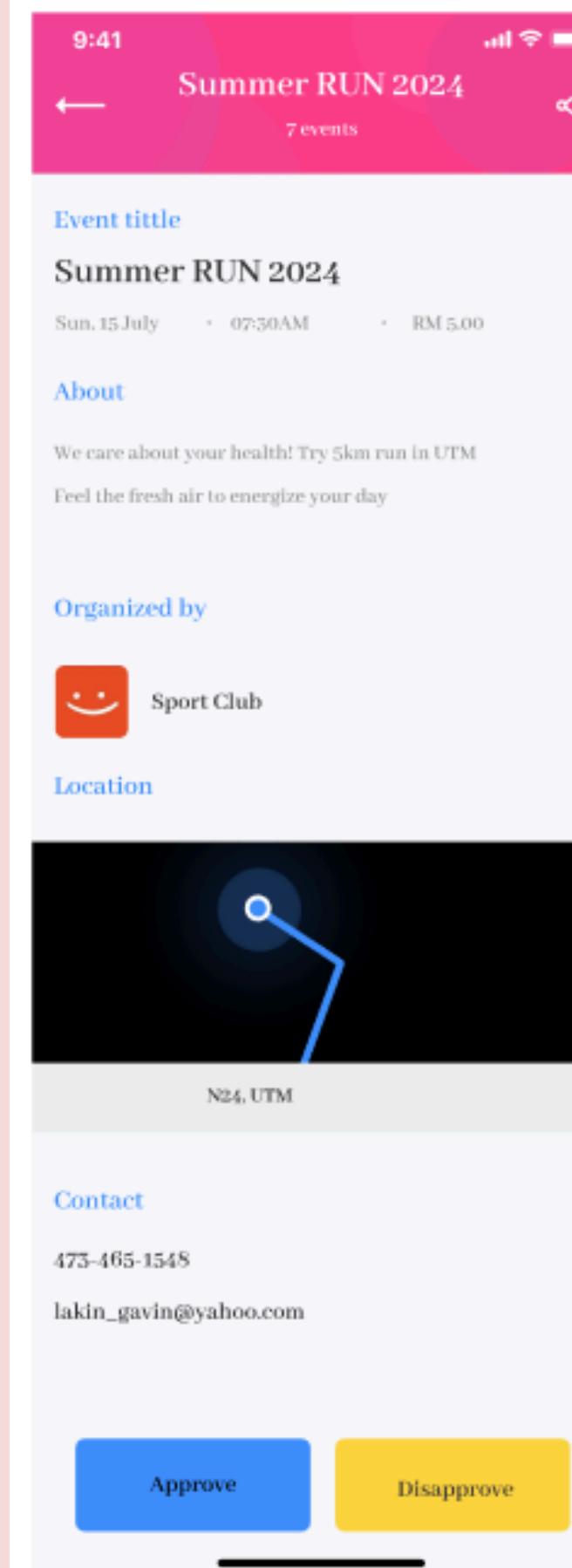
People Attending

 Ailly Pena
 Tammy Fields
 Patricia Reynolds
 John Wells
 Tyler Perry
 Sarah Douglas
 Jennifer Banks
 Edward Bell

Event details and list of participants

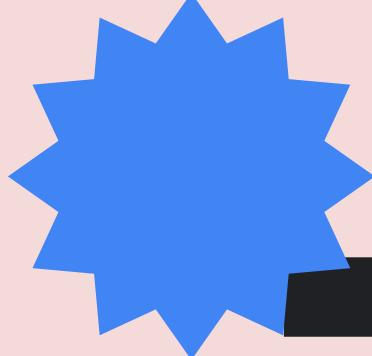
# Interface for Administrator





Approve and disapprove event

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# Thank You



for listening

*Clubhub, your way to an amazing university life!*