



**<HogwartsHub.com> Project Report: Phase 3**

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Name of Lecturer : Lecturer Rozilawati Binti Dollah @ Md. Zain  
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**Profile For Group Happy**

 <p>Name: Yap En Thong Matric Number: A23CS0284 E-mail: <a href="mailto:enthongy04@gmail.com">enthongy04@gmail.com</a> Phone number: 010-820 1396 Course: SECJH</p>	 <p>Name: Wong Jia Xuan Matric Number: A23CS0197 E-mail: <a href="mailto:wongjia.xuan@graduate.utm.my">wongjia.xuan@graduate.utm.my</a> Phone number: 011-1197 8253 Course: SECJH</p>
 <p>Name: Ong Ya Sian Matric Number: A23CS0260 E-mail: <a href="mailto:ongsian@graduate.utm.my">ongsian@graduate.utm.my</a> Phone number: 019-475 6134 Course: SECJH</p>	 <p>Name: Cheng Jia Yi Matric Number: A23CS0215 E-mail: <a href="mailto:chengyi@graduate.utm.my">chengyi@graduate.utm.my</a> Phone number: 016-811 7210 Course: SECJH</p>

Comments by Grader:

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## **1.0 Overview of Project**

The HogwartsHub.com project aims to develop an advanced Campus Resource Management System (CRMS) for Hogwarts University to modernise its administrative processes. This system will streamline facility booking, event management, and student and faculty administration by offering real-time visibility, reducing scheduling conflicts, and enhancing communication. Key features include a user-friendly interface, robust security measures, and personalised dashboards for various stakeholders. By centralising data and processes, HogwartsHub.com aims to improve efficiency, data accuracy, and decision-making, ultimately enhancing the overall student experience and ensuring the university's operational excellence. This system will promptly help transition Hogwarts University into a more modern and efficient institution.

## **2.0 Problem Statement**

### **1. Inefficient manual booking processes**

At Hogwarts University, booking campus facilities is a cumbersome process. Staff members must manually update Excel spreadsheets to request and confirm bookings for classrooms, auditoriums, labs and athletic fields. A centralised system for facility management at Hogwarts University needs real-time visibility into resource availability and usage. Staff members struggle to access up-to-date information on room availability, ongoing bookings and upcoming events. Students, faculty and event organisers always need to waste valuable time waiting for confirmation of their request to use the campus resources. Therefore, the booking process lacks efficiency, resulting in delays and potential scheduling conflicts.

### **2. Scheduling conflicts and disruptions**

Due to the manual and decentralised nature of current resource management at Hogwarts University, there is a possibility that some staff members may exhibit carelessness in handling numerous bookings and communication. This manual approach is prone to errors and delays as it is hard for staff members to cross-reference availability and coordinate with other departments to confirm the reservation. It is because there is a risk that staff members may overlook the important details, fail to update the information promptly or have ineffective communications. As a result, scheduling conflicts, double bookings and last-minute changes frequently occur, causing frustration and inconvenience for students, faculty and event organisers. These conflicts can cause events to be postponed, relocated or even cancelled.

### **3. Ineffective Event Management System**

The current event management system at Hogwarts University is inefficient and cumbersome. Event organisers encounter significant difficulties in managing registrations, coordinating attendees, and effectively promoting their events. The system lacks user-friendly interfaces and automated processes cause event organisers to manage information manually which is prone to errors. Organisers struggle to track attendance and manage capacity limits and feedback. Organisers need to wait for participants to complete the feedback and then manually compile the responses to analyse the data needed. Without an efficient system to deal with the myriad of data, organisers may overlook crucial feedback, leading to missed opportunities for further improvement.

### **4. Outdated Student and Faculty Management System**

Hogwarts University's reliance on outdated student and faculty management methods, characterised by manual and decentralised systems, leads to communication breakdowns. Faculty members encounter challenges in accessing vital information such as recruitment, teaching schedules, student records and grading systems. Faculty members are unable to plan and deliver courses effectively and communicate with students promptly. Students may experience delays or errors in accessing important information or receiving feedback from faculty members, leading to frustration and dissatisfaction.

### **3.0 Proposed Solutions**

HogwartsHub.com is a new system solution developed to address Hogwarts University's resource management challenges. This innovative Campus Resource Management System (CRMS) is presented to stakeholders, including administrators, faculty and students, to enhance operational efficiency and overall academic experience. HogwartsHub.com will improve administrative processes by centralising data and providing user-friendly interfaces, allowing all stakeholders to easily access and manage campus resources.

One of the key features of HogwartsHub.com is the Facility Booking and Management Module. This module allows users to explore, check availability, and reserve campus facilities such as classrooms, auditoriums, labs and sports fields. Administrators can define booking policies, manage reservations, and track resource utilisation in real-time, significantly reducing the likelihood of scheduling conflicts and ensuring smooth operations across campus. For example, faculty members can quickly reserve classrooms for their lectures while students can book study spaces without delays or double bookings.

In addition, HogwartsHub.com includes an Event Management Module designed to simplify the organisation and promotion of campus events. Event organisers can manage registrations, coordinate attendees, and collect feedback through an intuitive interface. This module also supports event promotion, ensuring that workshops, seminars and extracurricular activities reach their intended audience effectively. The streamlined process allows organisers to focus on delivering high-quality events without the hassle of manual data management and inefficient communication.

The Student Management Module within HogwartsHub.com offers comprehensive functionalities for managing student affairs, including enrollment, course registration, and academic records. Students can access their profiles, register for courses and view their schedules through a personalised dashboard. This module ensures that students have all the information they need at their fingertips, reducing administrative bottlenecks and enhancing the overall academic experience.

For faculty and staff, HogwartsHub.com features a Faculty and Staff Management Module. This module facilitates the management of recruitment, scheduling, performance evaluation, and leave management. Faculty members can access their teaching schedules, submit grades, and communicate with students efficiently. The system's centralised data approach reduces errors and delays, promoting a more organised and productive academic environment.

Moreover, HogwartsHub.com offers robust technical capabilities to ensure reliability and security. The system is accessible via smartphones, tablets, and computers, making it convenient for all users. A secure server infrastructure and a comprehensive database system protect sensitive data and support seamless data exchange. Encryption, access controls, and secure authentication mechanisms are implemented to safeguard user information, ensuring privacy and compliance with data protection regulations.

Operationally, the centralisation and automation provided by HogwartsHub.com significantly reduce the time and effort required for managing campus resources. Real-time visibility into resource availability and usage helps administrators make informed decisions, while automated processes eliminate the risk of manual errors. This efficiency not only improves day-to-day operations but also enhances the overall satisfaction of students, faculty, and staff.

From an economic perspective, the implementation of HogwartsHub.com is a sound investment. Initial costs cover the development of the system, including the creation of a user-friendly website and the integration of automatic data logging functionalities. The system's ability to improve resource utilisation and reduce administrative overheads translates into long-term cost savings. Additionally, ongoing maintenance and updates ensure that the system remains reliable and effective.

In summary, HogwartsHub.com presents a comprehensive solution to the resource management challenges at Hogwarts University. By centralising and streamlining various administrative processes, this CRMS enhances communication, improves accessibility, and promotes efficient coordination among all stakeholders. The user-centric design of HogwartsHub.com ensures a seamless experience, enabling students, faculty, and staff to navigate the system effortlessly and

focus on their core academic activities. Implementing HogwartsHub.com is crucial for achieving operational excellence and fostering a thriving academic environment at Hogwarts University.

## **4.0 Current Business Process/Workflow**

Here are the scenarios and workflow of the current business process for students :

1. Log in to the system.
2. Customising according to preference.
  - Students adjust settings for a personalised interface
3. Various options are displayed on the main menu.
4. Facility Booking and Management
  - 4.1. Facility Booking
    - 4.1.1. Search for available facilities.
    - 4.1.2. View availability of desired facilities such as classrooms, labs and sports fields.
    - 4.1.3. Select the facility and book the desired time slot.
    - 4.1.4. Receive booking confirmation.
5. Event Management
  - 5.1. Register for an event.
    - 5.1.1. View upcoming campus events, workshops and seminars.
    - 5.1.2. Select an event to view detailed information.
    - 5.1.3. Register for the event.
    - 5.1.4. Receive event registration confirmation and updates.
  - 5.2. Provide feedback.
    - 5.2.1. Access event feedback forms post-event.
    - 5.2.2. Submit feedback and rate the event.
6. Student Management
  - 6.1. Academic Profile
    - 6.1.1. Manage academic profile.
    - 6.1.2. View personal academic profile including enrolled courses and academic progress.
    - 6.1.3. Register for new courses.
    - 6.1.4. Track grades and academic milestones.
    - 6.1.5. Register for extracurricular activities

Here are the scenarios and workflow of the current business process for faculty members :

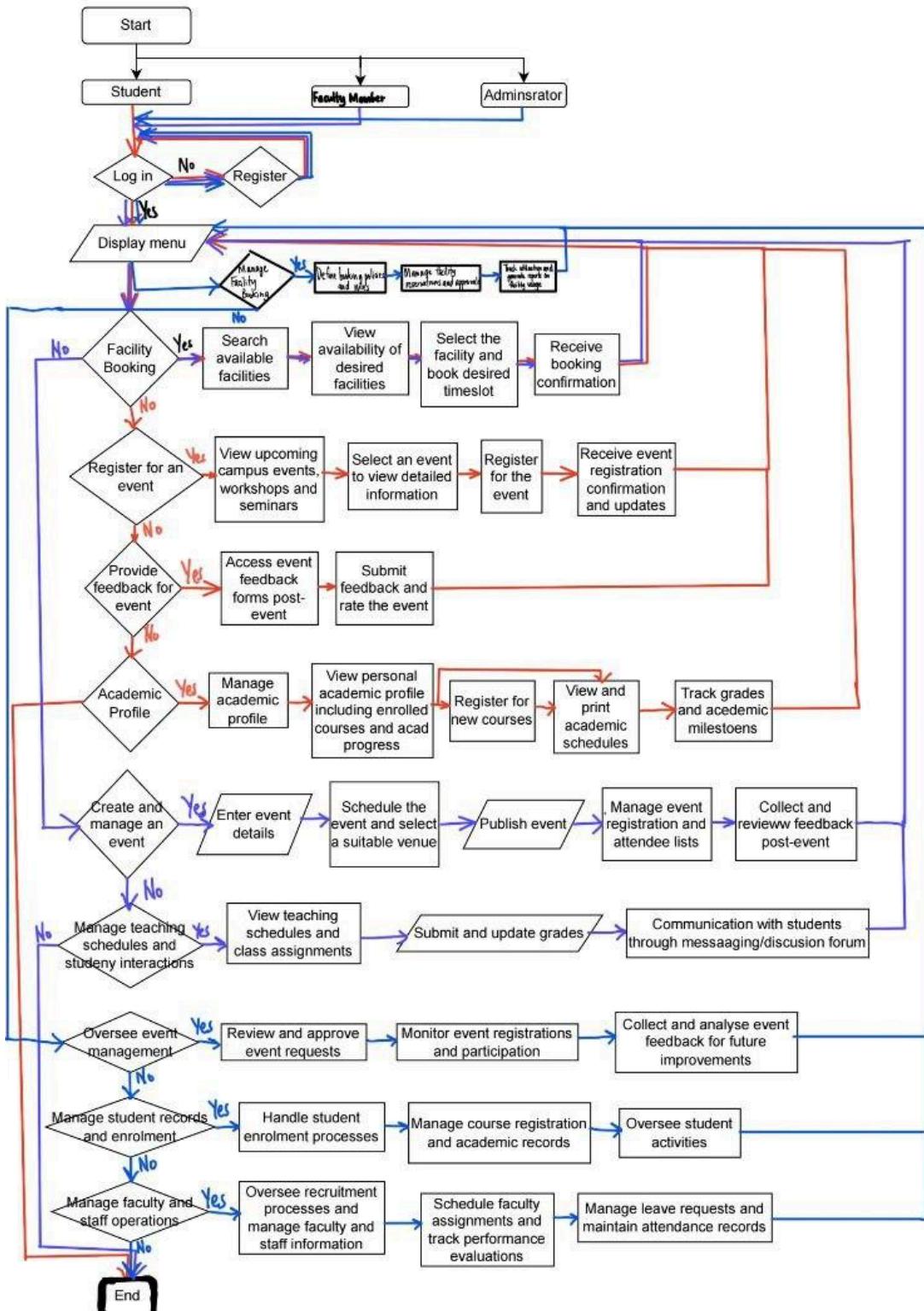
1. Log in to the system.
2. Various options are displayed on the main menu.
3. Facility Booking and Management
  - 3.1. Facility Booking
    - 3.1.1. Search for available facilities.
    - 3.1.2. View availability of desired facilities such as classrooms, labs and sports fields.
    - 3.1.3. Select the facility and book the desired time slot.
    - 3.1.4. Receive booking confirmation.
4. Event Management
  - 4.1. Option to create and manage an event.
    - 4.1.1. Enter event details including title, description, date and time.
    - 4.1.2. Schedule the event and select a suitable venue.
    - 4.1.3. Publish the event for campus-wide visibility.
    - 4.1.4. Manage event registration and attendee lists.
    - 4.1.5. Collect and review feedback post-event.
5. Faculty and Staff Management
  - 5.1. Option to manage teaching schedules and student interactions.
    - 5.1.1. View teaching schedules and class assignments.
    - 5.1.2. Submit and update grades.
    - 5.1.3. Communicate with students through messaging or discussion forums.

Here are the scenarios and workflow of the current business process for administrators :

1. Log in to the system.
2. Various options are displayed on the main menu.
3. Facility Booking and Management
  - 3.1. Option to manage facility bookings.
    - 3.1.1. Define booking policies and rules.
    - 3.1.2. Manage facility reservations and approvals.
    - 3.1.3. Track utilisation and generate reports on facility usage.
4. Event Management
  - 4.1. Option to oversee event management.
    - 4.1.1. Review and approve event requests.
    - 4.1.2. Monitor event registrations and participation.
    - 4.1.3. Collect and analyse event feedback for future improvements.
5. Student Management
  - 5.1. Option to manage student records and enrolment.
    - 5.1.1. Handle student enrolment processes.
    - 5.1.2. Manage course registration and academic records.
    - 5.1.3. Oversee student activities and ensure compliance with institutional policies.
6. Faculty and Staff Management
  - 6.1. Option to manage faculty and staff operations.
    - 6.1.1. Oversee recruitment processes and manage faculty and staff information.
    - 6.1.2. Schedule faculty assignments and track performance evaluations.
    - 6.1.3. Manage leave requests and maintain attendance records.

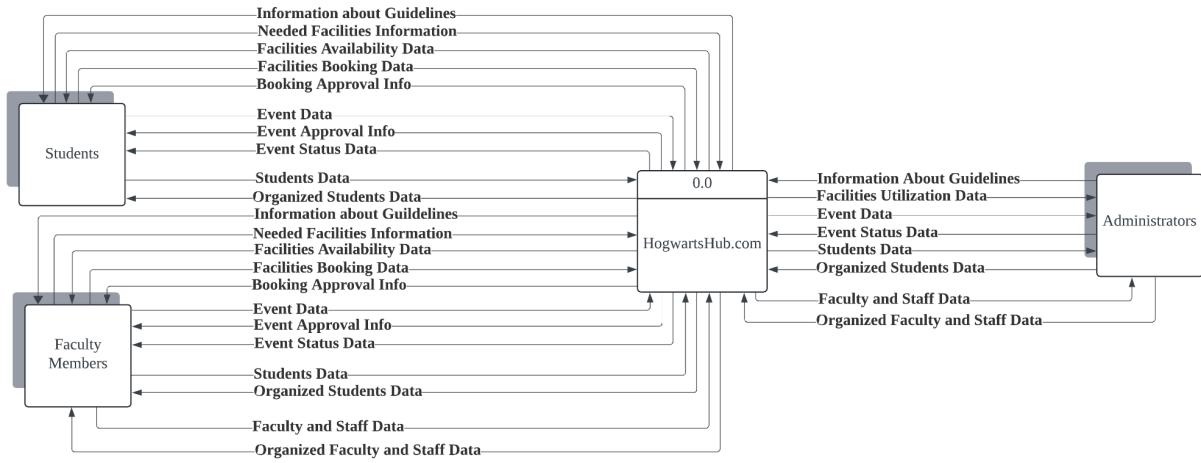
This structured and detailed approach ensures that all critical steps and functionalities are fully covered, giving students, faculty and administrators at HogwartsHub.com a clear understanding of the current business processes.

## AS-IS System Workflow

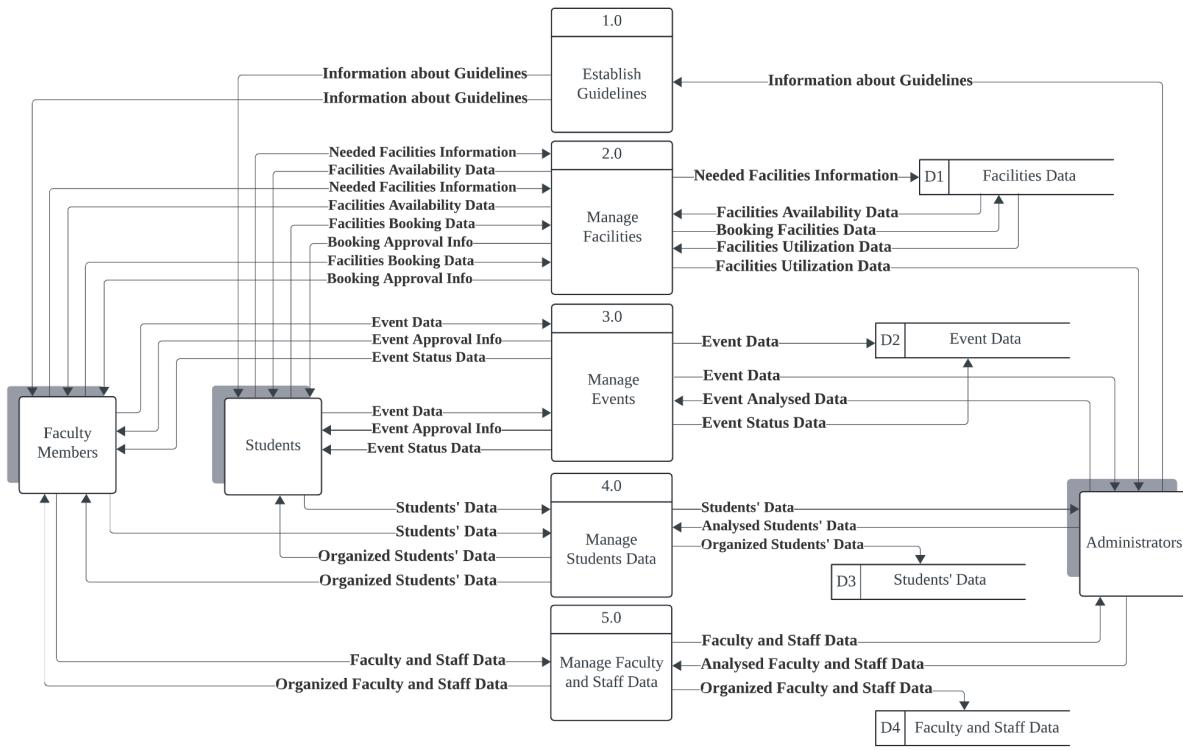


## 5.0 Logical DFD (AS-IS)

### 5.1 Context Diagram

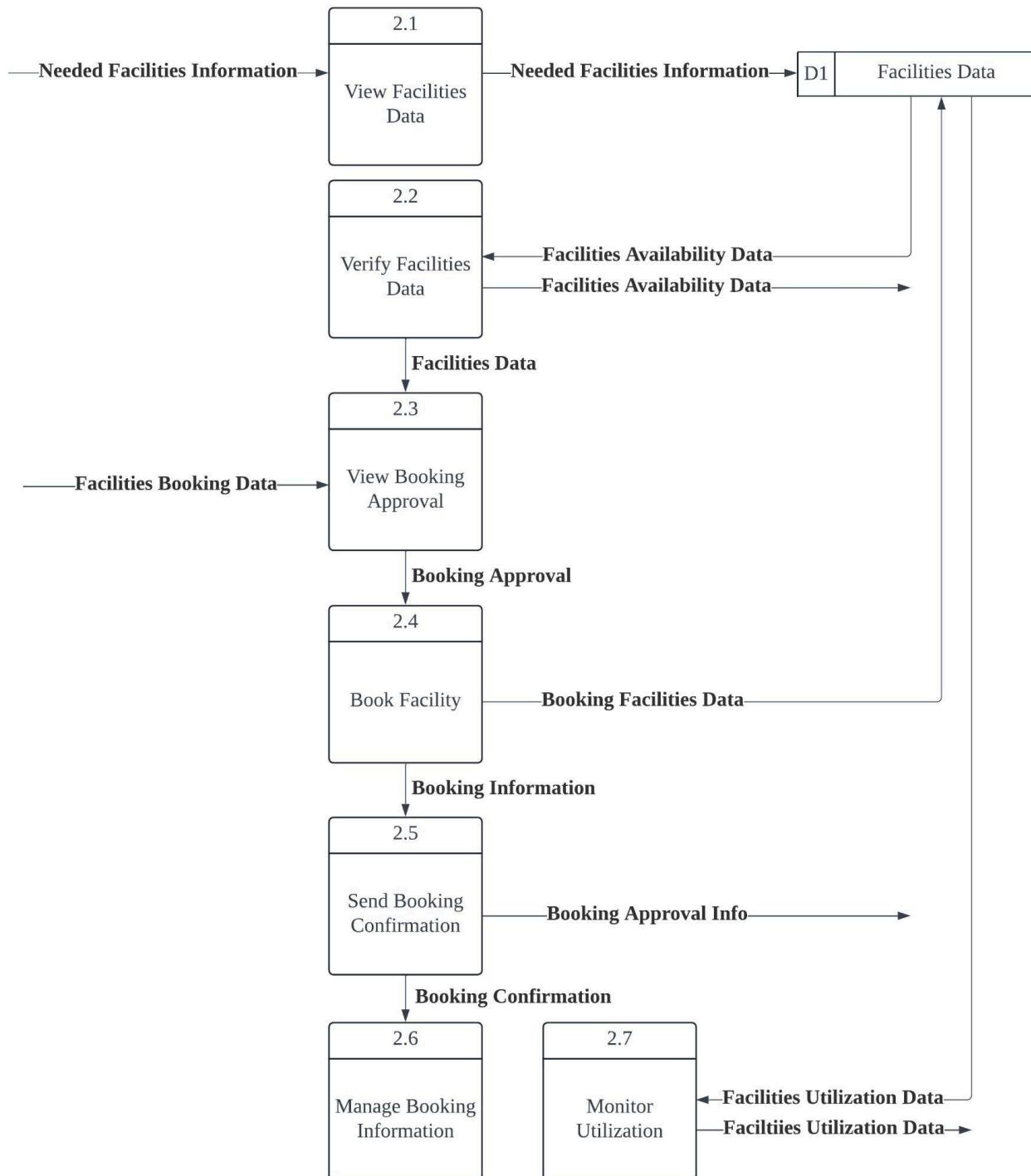


## 5.2 Diagram 0

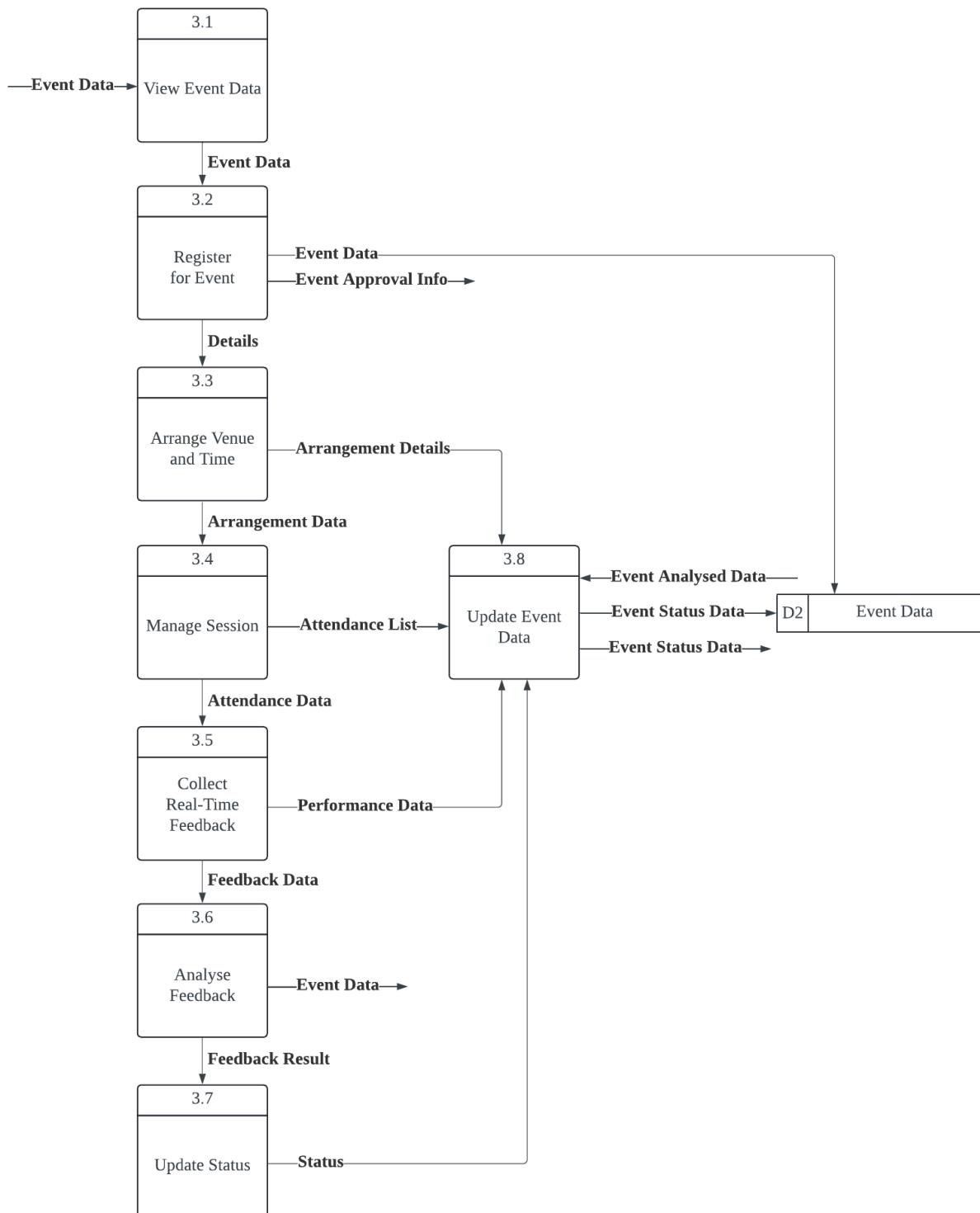


## 5.3 Child Diagram

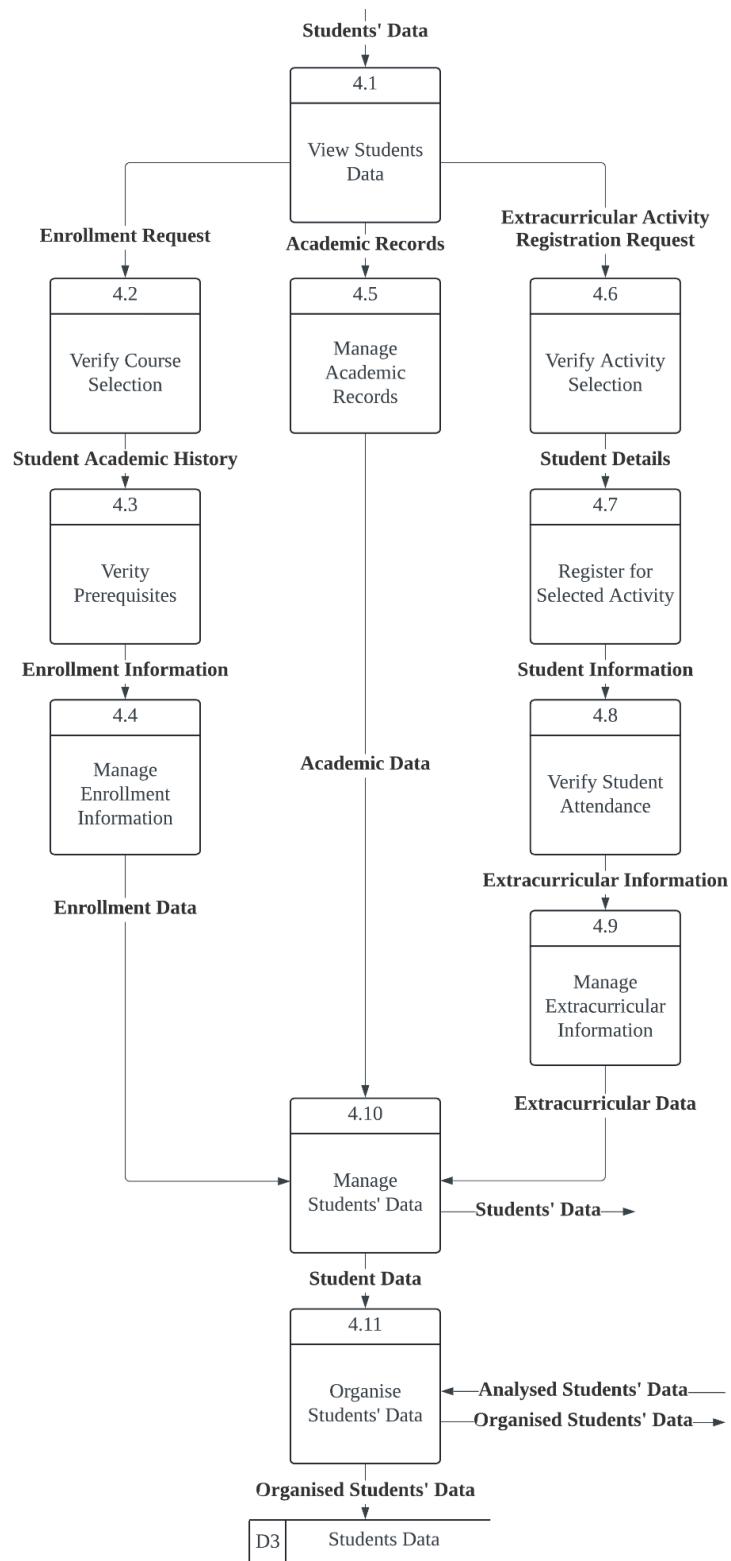
### 5.3.1 Manage Facilities



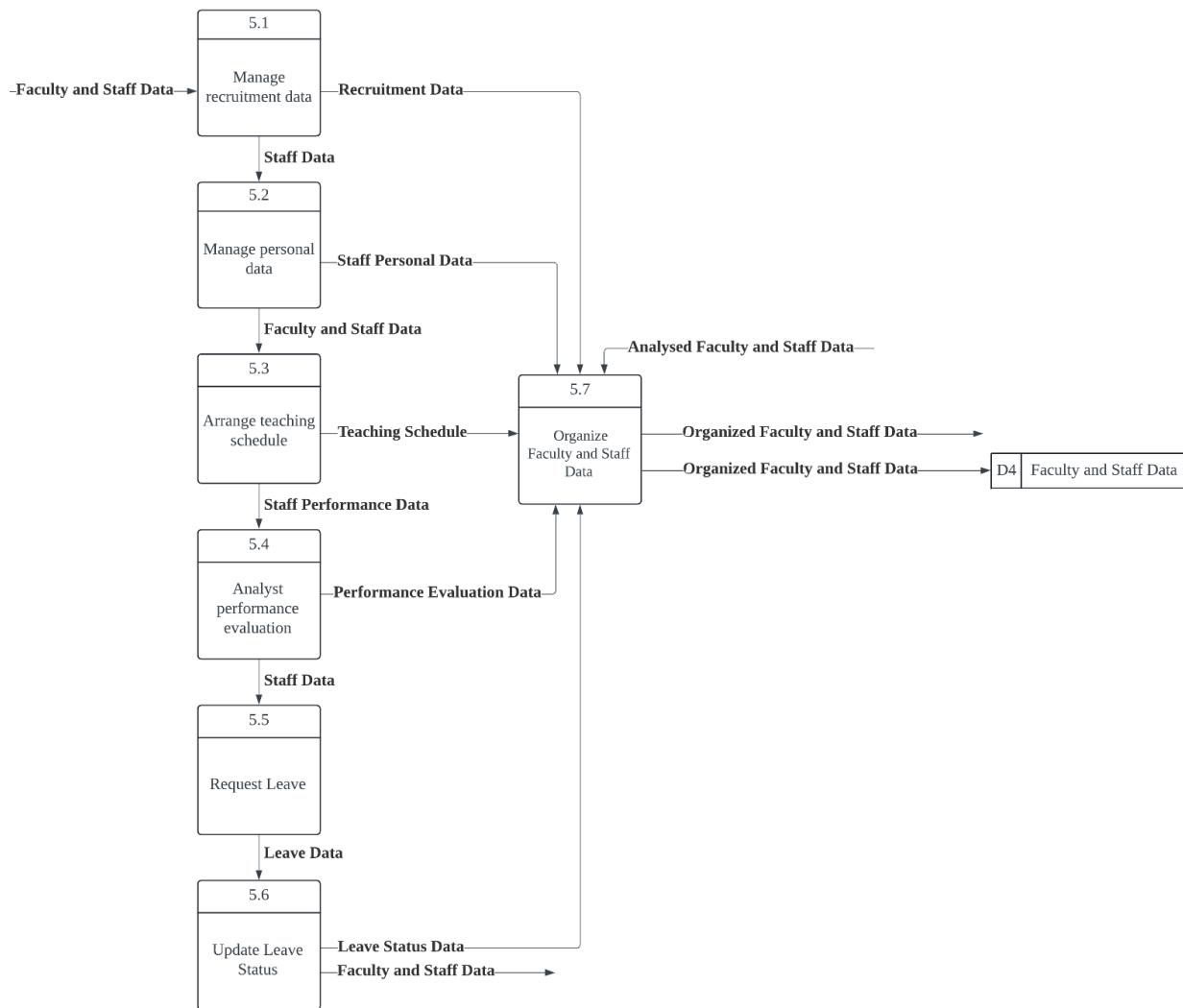
### 5.3.2 Manage Events



### 5.3.3 Manage Student



### 5.3.4 Manage Faculty and Staff Members



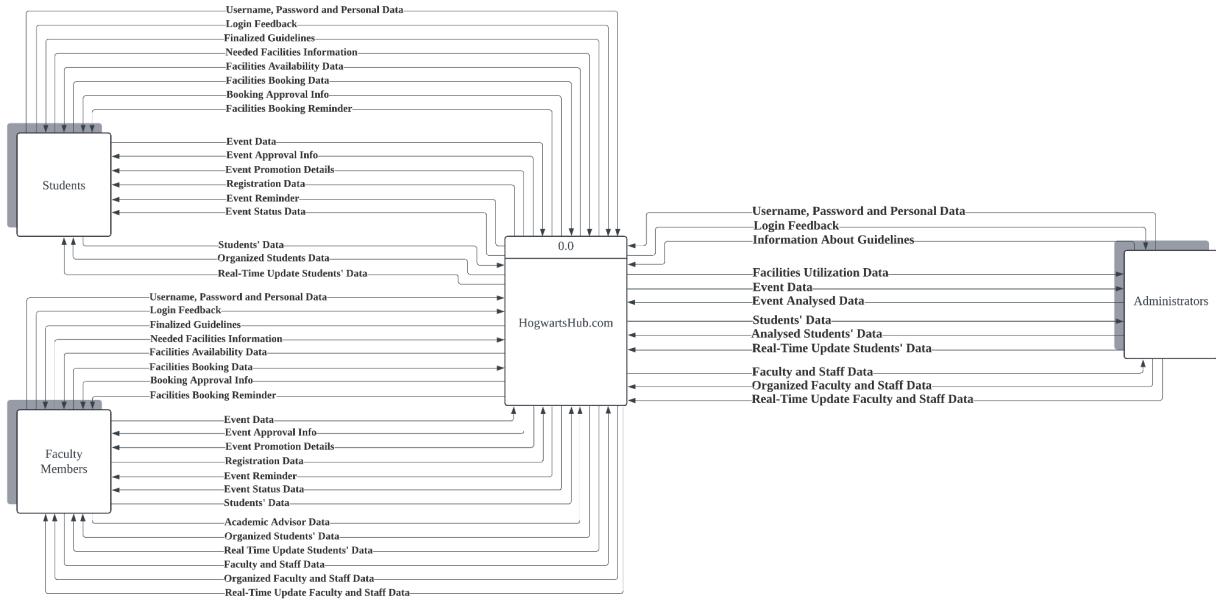
## **6.0 System Analysis and Specification**

The detailed outline of current workflows for students, faculty members and administrators at HogwartsHub.com covers various essential functionalities such as facilities booking, event management, student management, faculty and staff management. For students, the system allows for booking facilities, registering for events, managing academic profiles and providing feedback. Faculty members can log in the system to book facilities, create and manage events, oversee teaching schedules, submit grades and communicate with students. Administrators can manage facility bookings, event approvals, student records, course registration, faculty recruitment and performance tracking.

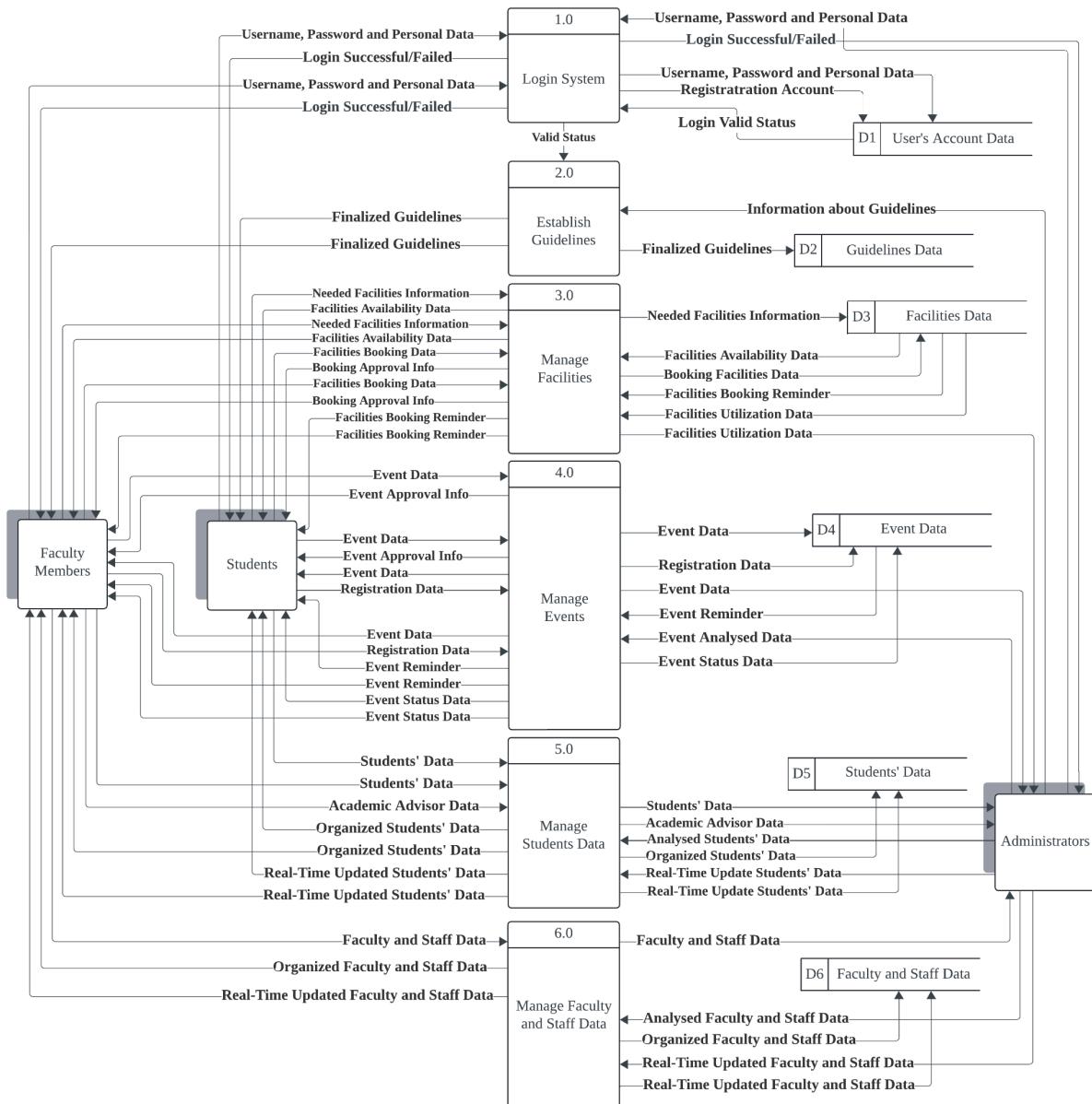
To enhance this process, the potential improvements include incorporating password-based login into HogwartsHub.com, ensuring a secure and user-friendly authentication process across various modules provided in the system. Password-based login ensures compliance with security standards and provides a familiar authentication option for most of the users. Besides, in addition to enabling users to register for events, HogwartsHub.com can enhance its event management module by promoting events to both students and faculty members. Implementing a feature where upcoming events are prominently displayed on user dashboards or through notifications, ensuring broader visibility across the institution. Apart from that, the student management module can be enhanced by integrating academic advisor data and providing real-time updates to student profiles. Associating each student with a designated academic advisor within the system, it can facilitate direct communication between students and their academic advisors for advisory support. The real-time updates of students' data can also enable advisors to view and update student information dynamically, including academic progress, course enrollment and extracurricular activities, ensuring advisors have timely and accurate data to support student success. Last but not least, real-time updates for faculty and staff management modules can allow faculty members to manage their profiles, including teaching schedules, research activities and professional development achievements instantly. Streamlining administrative processes by enabling staff members to update personal and professional information seamlessly, supporting efficient HR management and resource allocation within the institution.

## 6.1 Logical DFD TO-BE system

### 6.1.1 Context Diagram

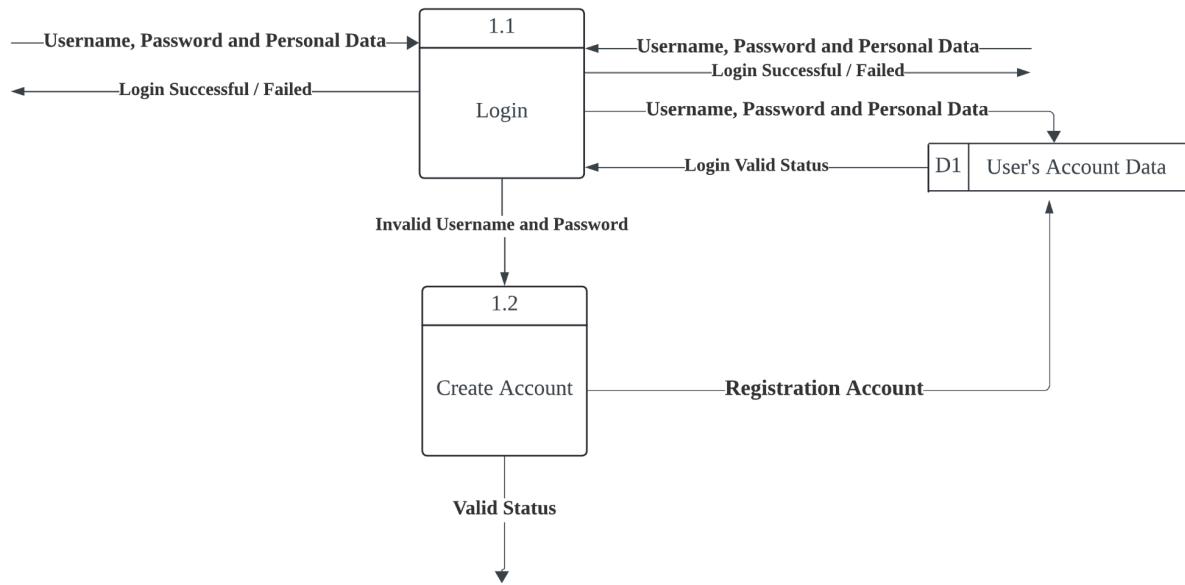


## 6.1.2 Diagram 0

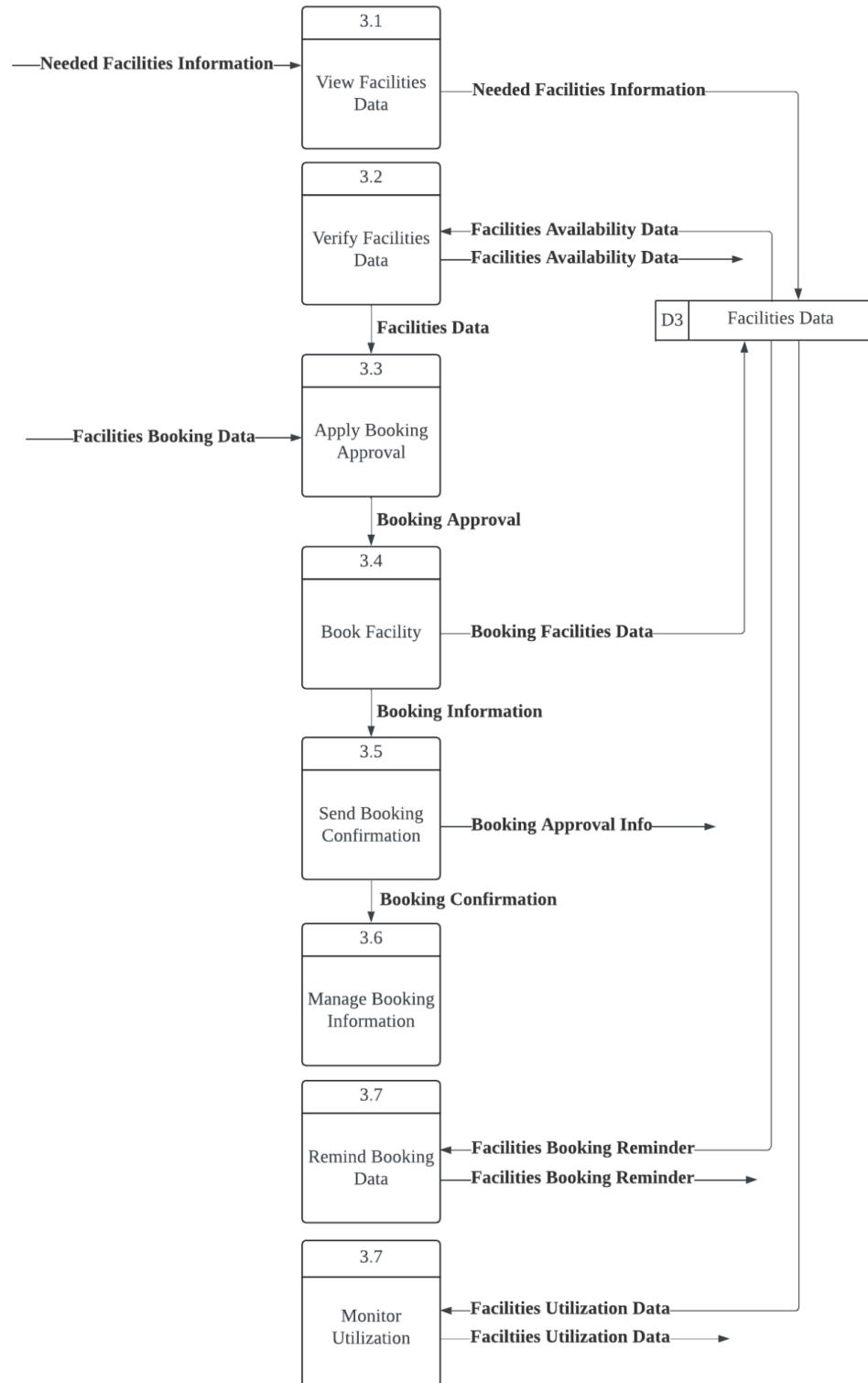


### 6.1.3 Child Diagram

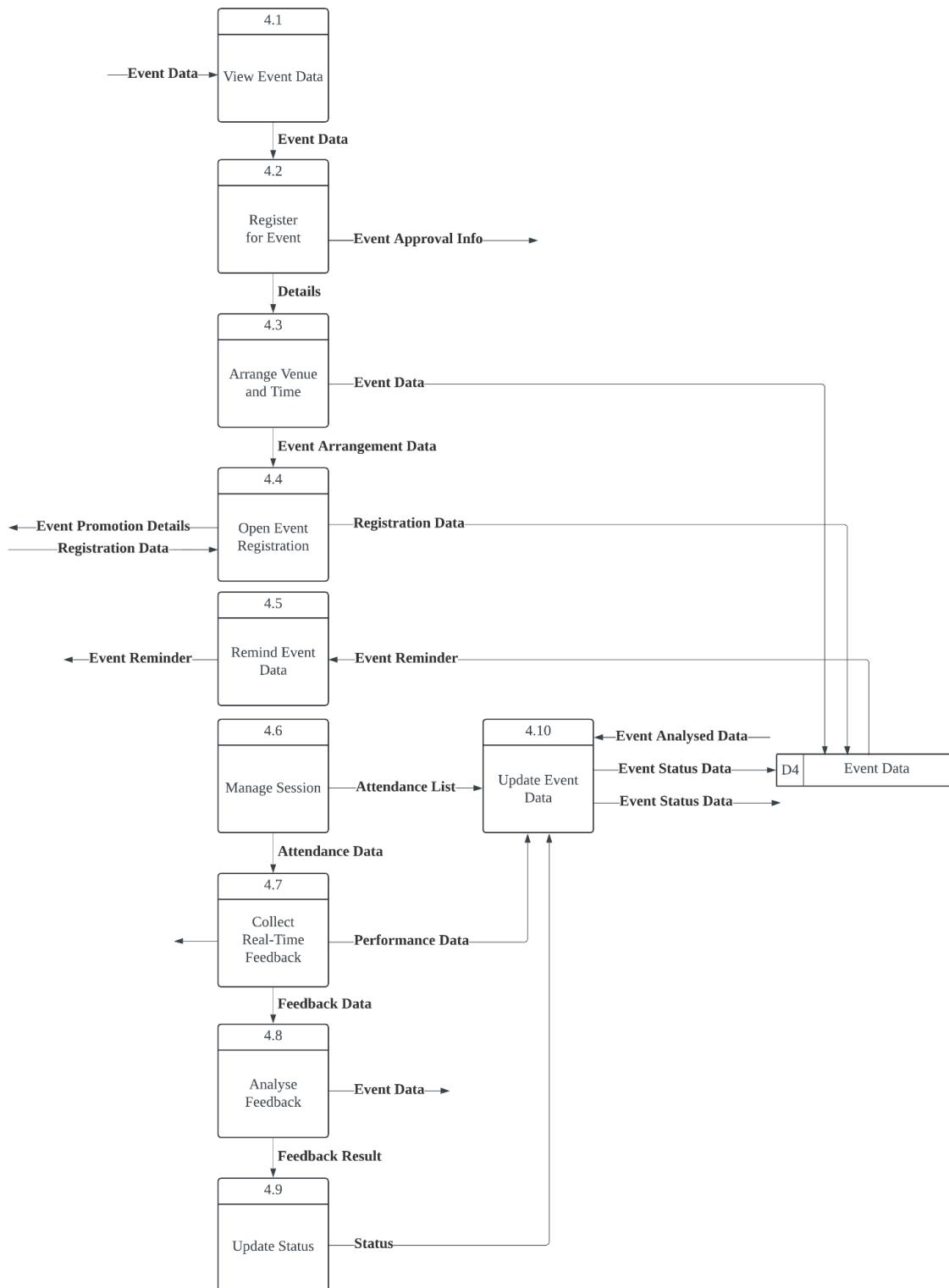
#### 6.1.3.1 Login System



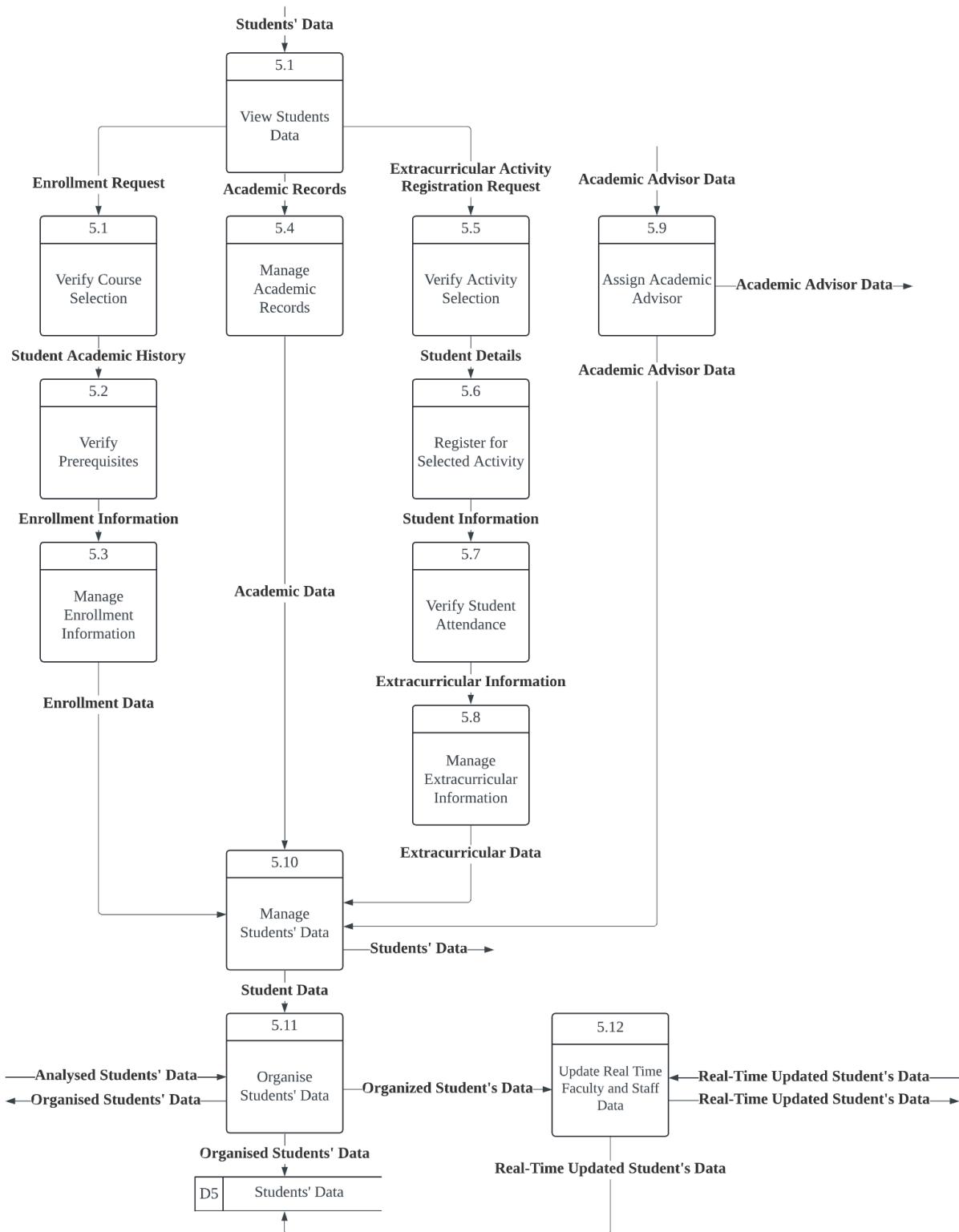
### 6.1.3.2 Manage Facilities



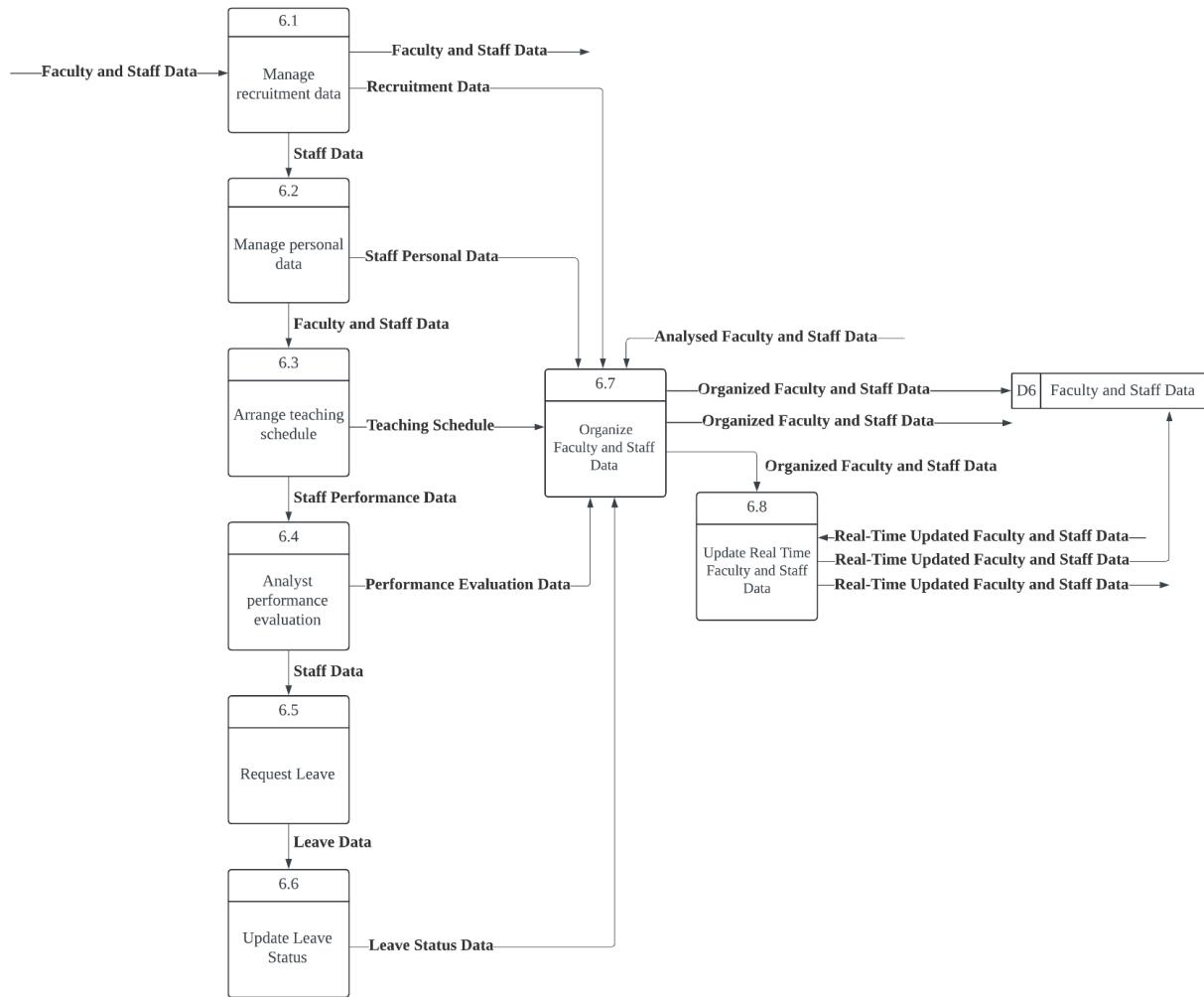
### 6.1.3.3 Manage Events



#### 6.1.3.4 Manage Student



### 6.1.3.5 Manage Faculty and Staff Members



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

We decided to use Structured English to describe the logic process which involves formula, repetition or simple structured decision.

### 6.2.1 Login System

DO

READ Username, Password and Personal Data

BEGIN IF

IF received the username, password and personal data

    Compare the information from the User Account Database

    THEN login to the system

ELSE

    Register to the system

END IF

### 6.2.2 Manage Facilities

DO

READ Needed Facilities Information

BEGIN IF

IF received facility data

    View and verify facilities data from the facilities database

    THEN apply booking approval to the facilities database

        IF booking approval approved

            Book facility in the facilities database

            THEN Send booking confirmation to the portal.

            Remind booking facilities and monitor utilisation from the database.

        ELSE failed to book facilities

    ELSE change other facilities

END IF

### 6.2.3 Manage Events

DO

READ

BEGIN IF

IF received event data

    View event data from the event database

    THEN register event approval to the event database

        IF event approval

            Arrange venue and time in the event database

            THEN public events to the portal

            Remind event information and manage session

            Collect and Analyse Real-Time Feedback

            Store Event Data in the database

        ELSE failed to register event

    ELSE failed to apply register event

END IF

#### 6.2.4 Manage Student

DO

READ student data

BEGIN IF

IF the student's course selection is submitted

    THEN Retrieve student course selection data

    Check if the selected courses are available

    Check if the student meets the prerequisites for the selected course

    IF all selected courses are available and prerequisites are met

        THEN Approve course selection

            Update student's academic records with the selected courses

    ELSE

        Reject the course selection

        Notify the student of the issues (course unavailability, prerequisite not met)

IF the student's activity selection is submitted

    THEN Retrieve student activity selection data

    Check if the selected activities are available

    IF all selected activities are available

        THEN Approve activity selection

            Mark the attendance as verified

            Add or update the details of the extracurricular activities

            Save the updated records in the student's profile

    ELSE

        Reject the activity selection

Notify the student of the issues (activity unavailability, prerequisite not met)

ENDIF

### 6.2.5 Manage Faculty and Staff Members

DO

READ Faculty and Staff Data

BEGIN IF

IF recruitment and personal data need to be managed

    Retrieve existing recruitment data.

    Add or update recruitment details.

    THEN Retrieve existing personal data of faculty and staff.

    Add or update personal details.

IF the teaching schedule needs to be arranged

    THEN Retrieve faculty and staff availability.

    Allocate courses and teaching times based on availability and course requirements.

    Save the arranged teaching schedule.

IF performance evaluation needs to be analysed

    THEN Retrieve performance data of faculty and staff.

    Assess performance based on predefined criteria.

    Save the performance evaluation results.

IF a leave request is submitted

    THEN Retrieve the leave request data.

    Verify the request details and check leave balances.

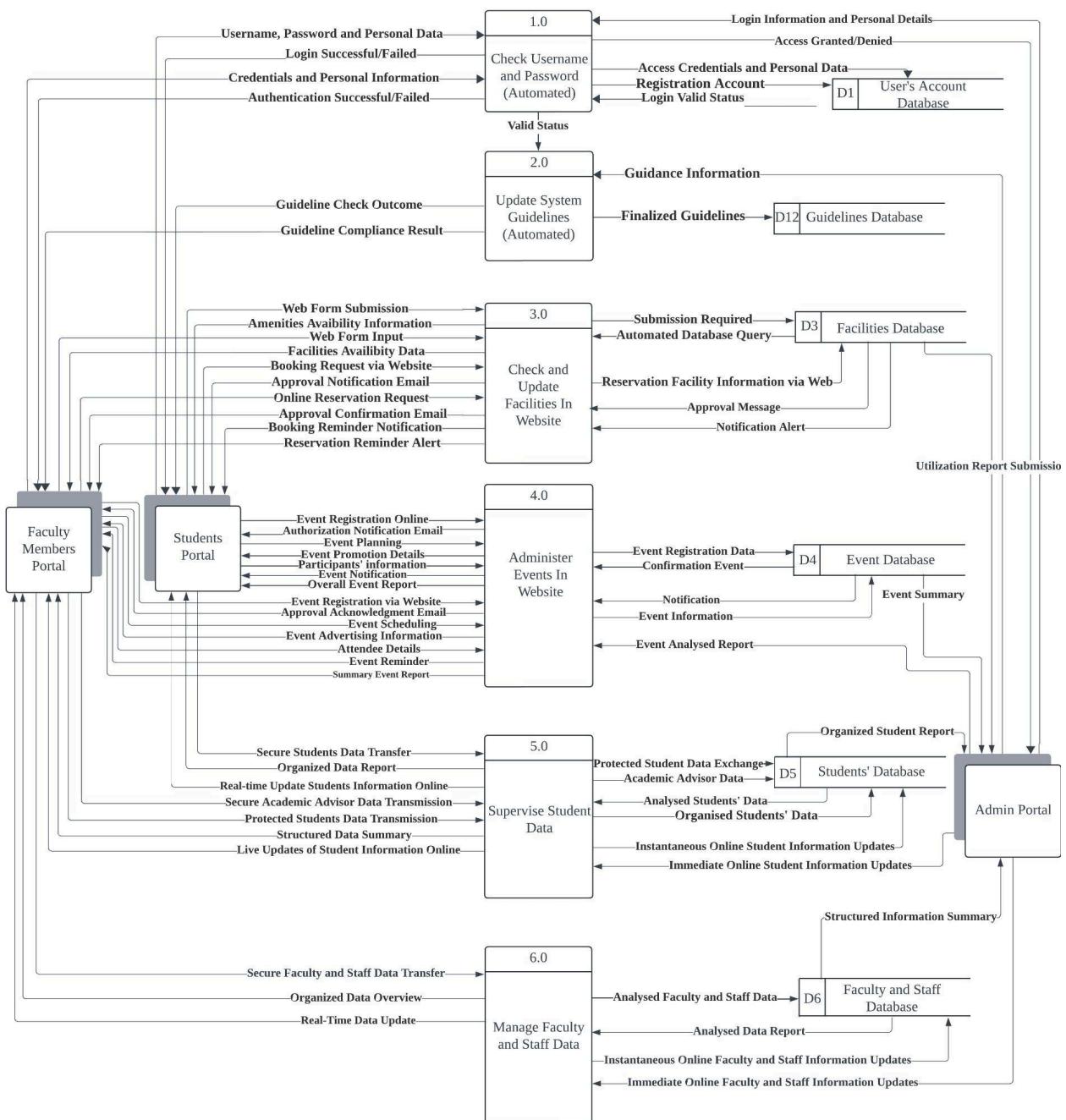
    Update leave status data.

END IF

## 7.0 Physical System Design

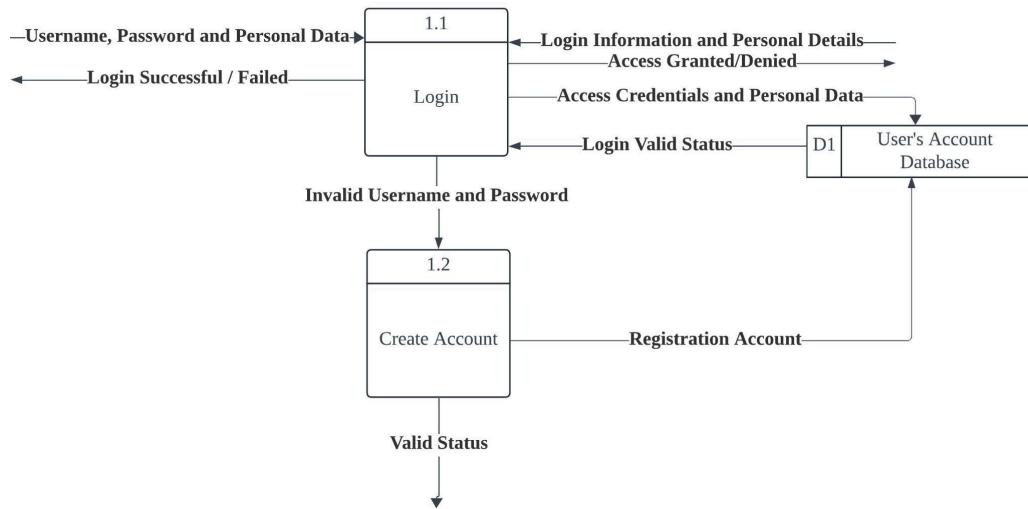
### 7.1 Physical DFD TO-BE system

#### 7.1.1 Diagram 0

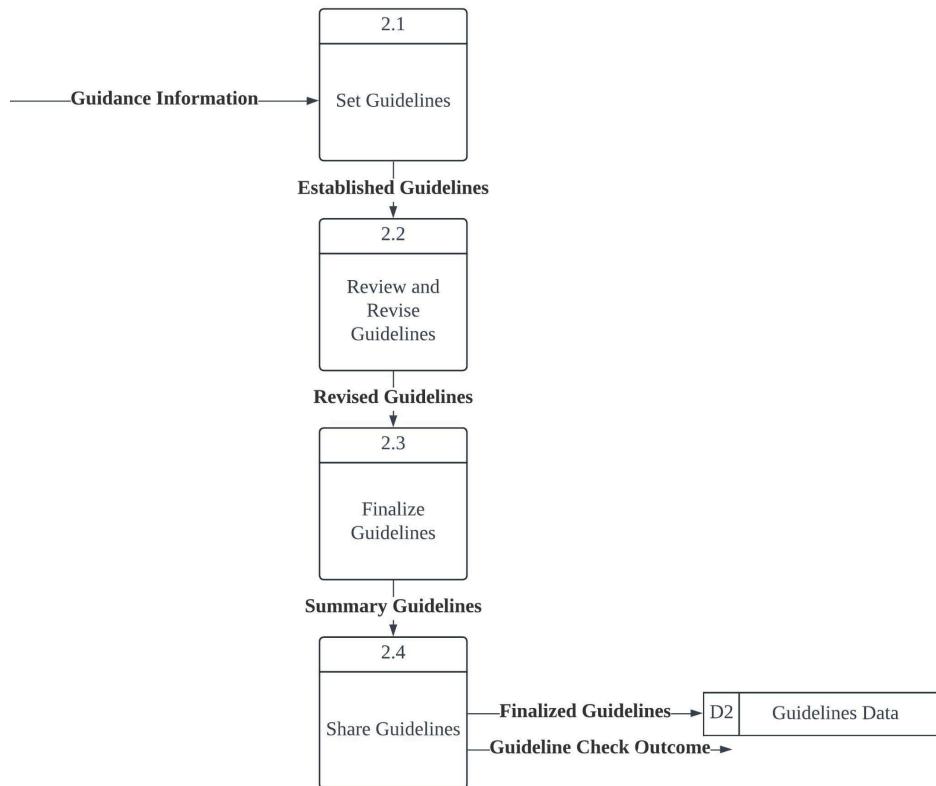


## 7.1.2 Child

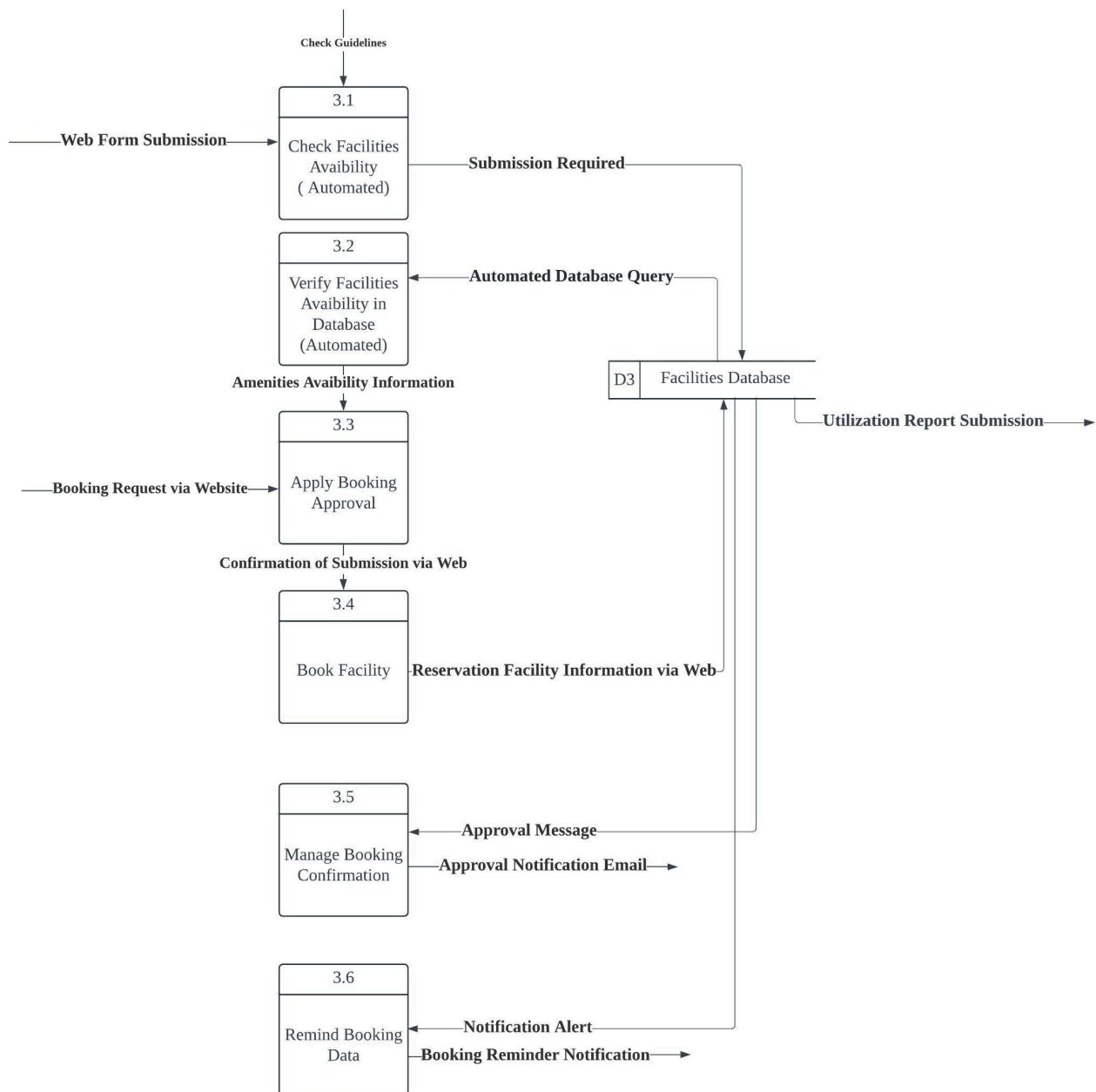
### 7.1.2.1 Process 1: Check Username and Passwords (Automated)



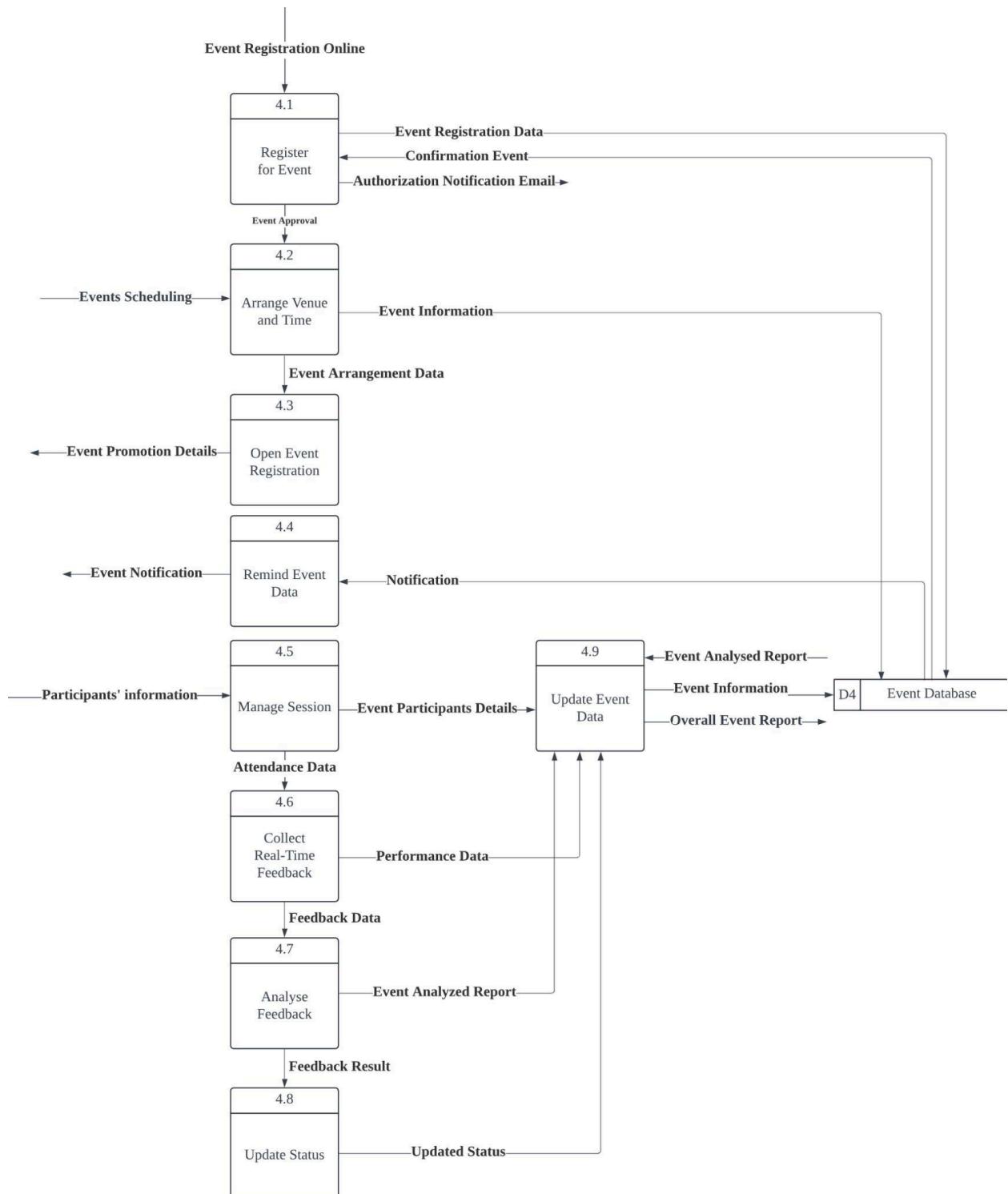
### 7.1.2.2 Process 2: Update System Guidelines (Automated)



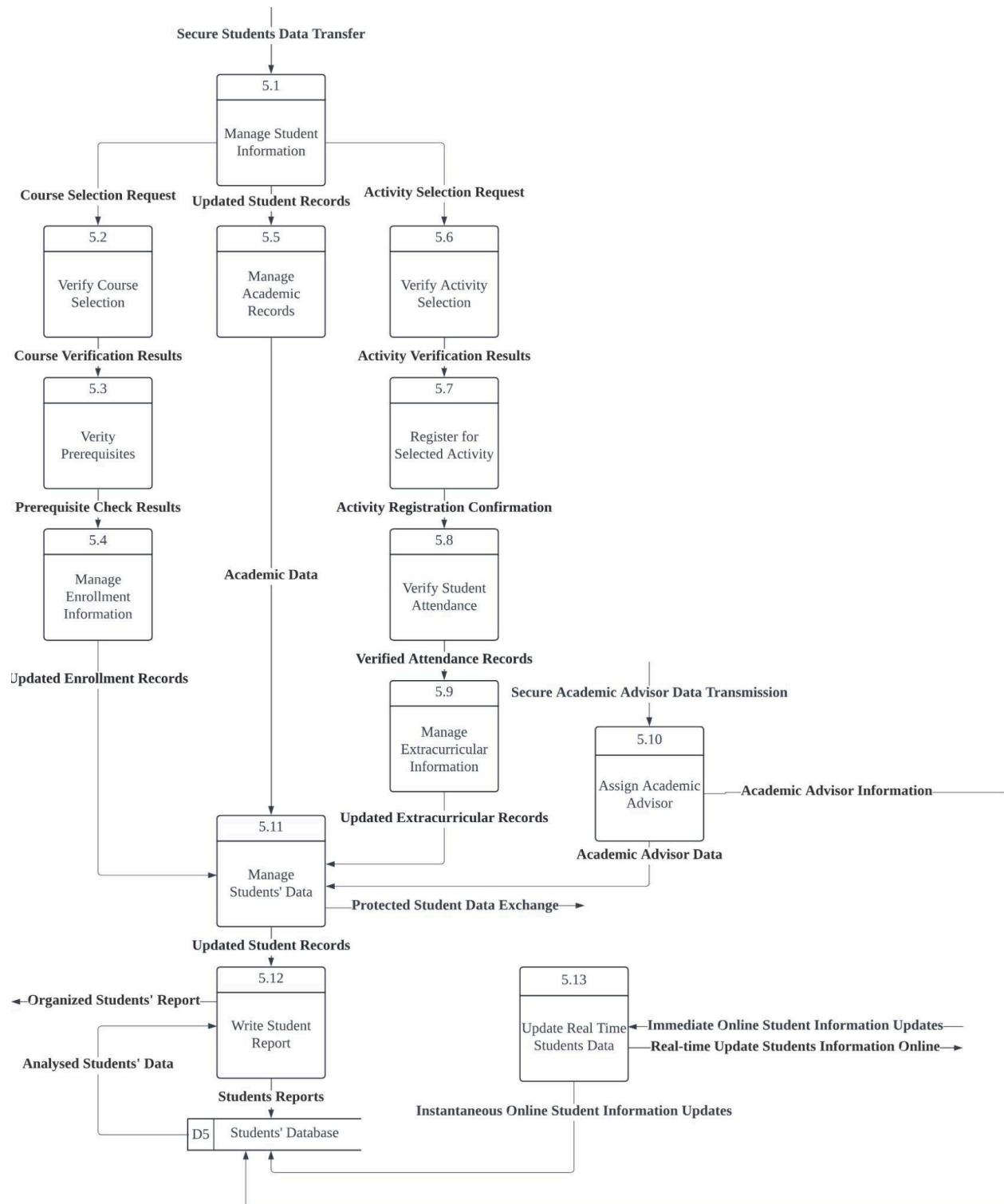
### 7.1.2.3 Module 1: Check and Update in Website



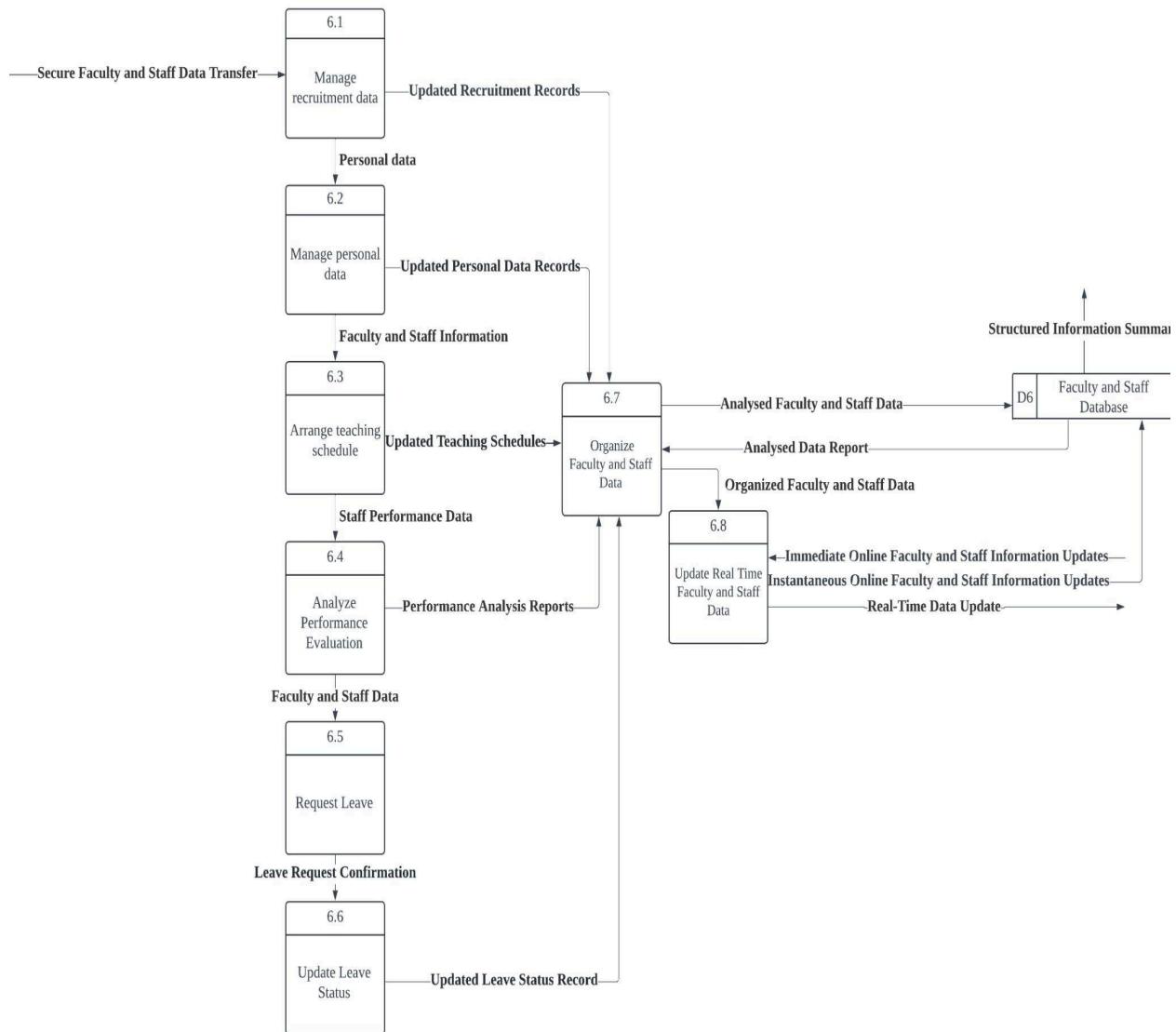
#### 7.1.2.4 Module 2: Administer Events In Website



### 7.1.2.5 Module 3: Supervise Student Data

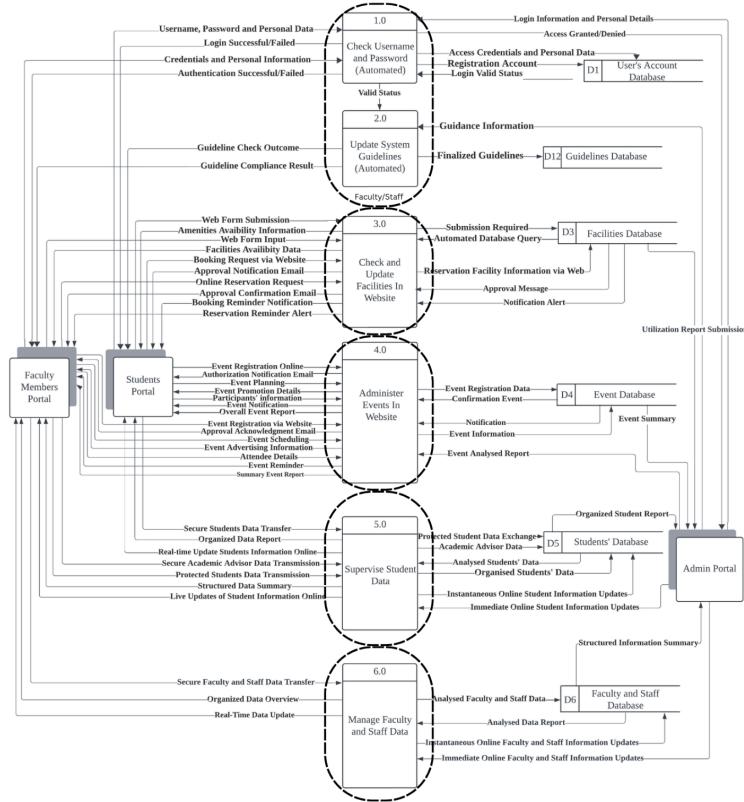


### 7.1.2.6 Module 4: Manage Faculty and Staff Data



### 7.1.3 Partitioning

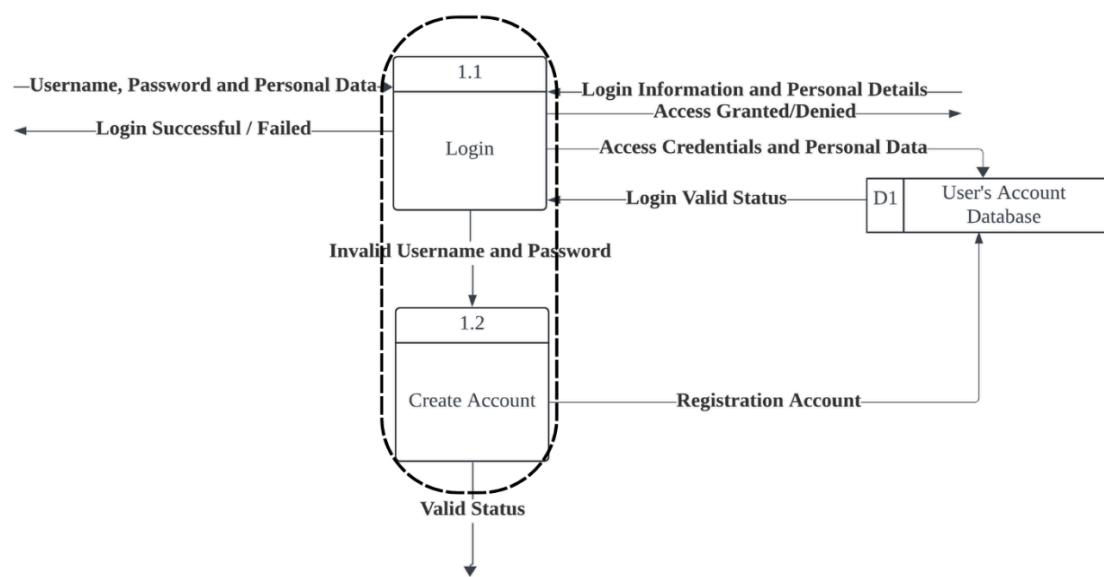
#### 7.1.3.1 Context Diagram



The partitioning of the DFD above is based on different criteria such as user groups, timing, tasks, efficiency, consistency of data, and security.

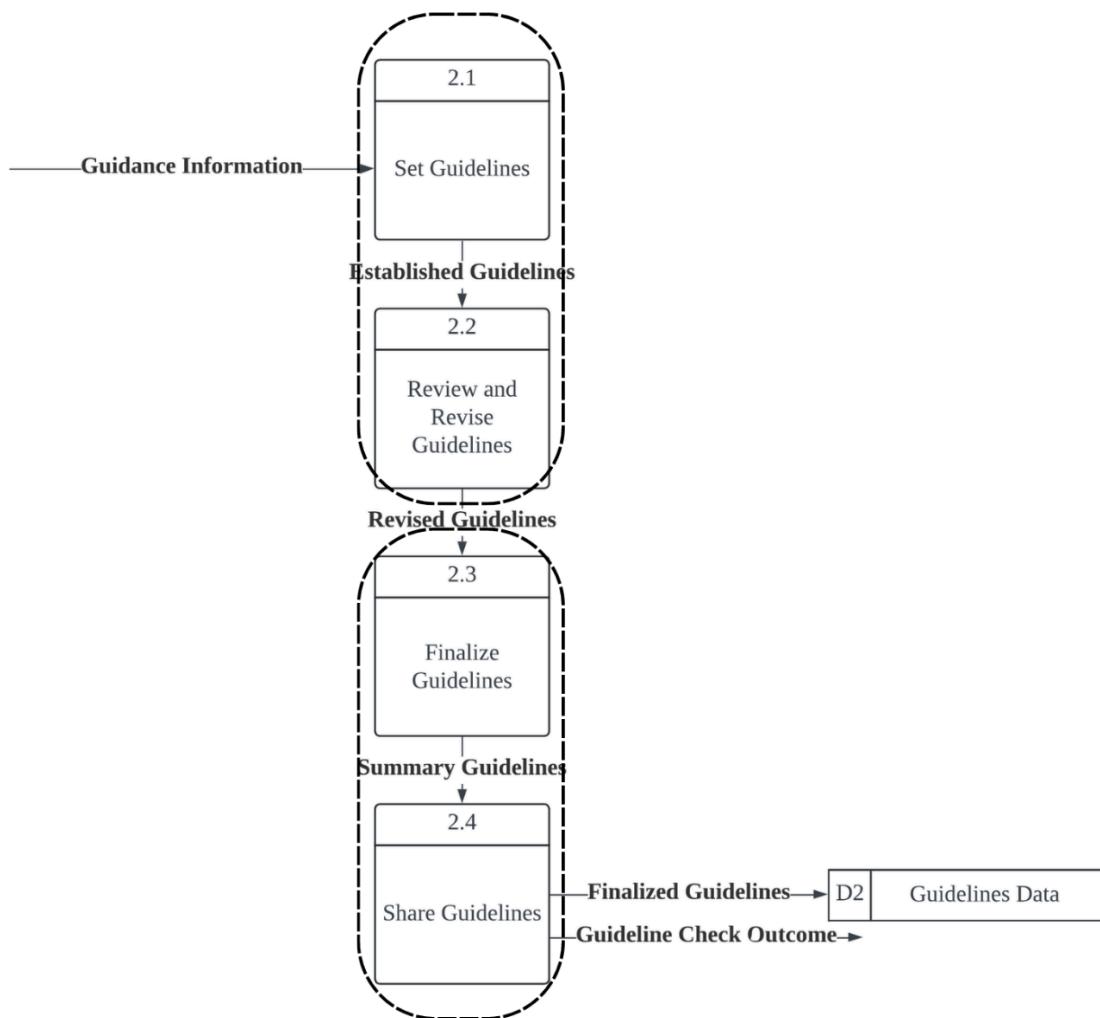
- The first partition is responsible for user authentication, enclosing processes 1.0 and 2.0.
- The second partition is responsible for facility booking and management, enclosing process 3.0.
- The third partition is responsible for event management, enclosing process 4.0.
- The fourth partition is responsible for student management, enclosing process 5.0.
- The last partition is responsible for faculty and staff management, enclosing process 6.0.

#### 7.1.3.2 Process 1: Check Username and Passwords (Automated)



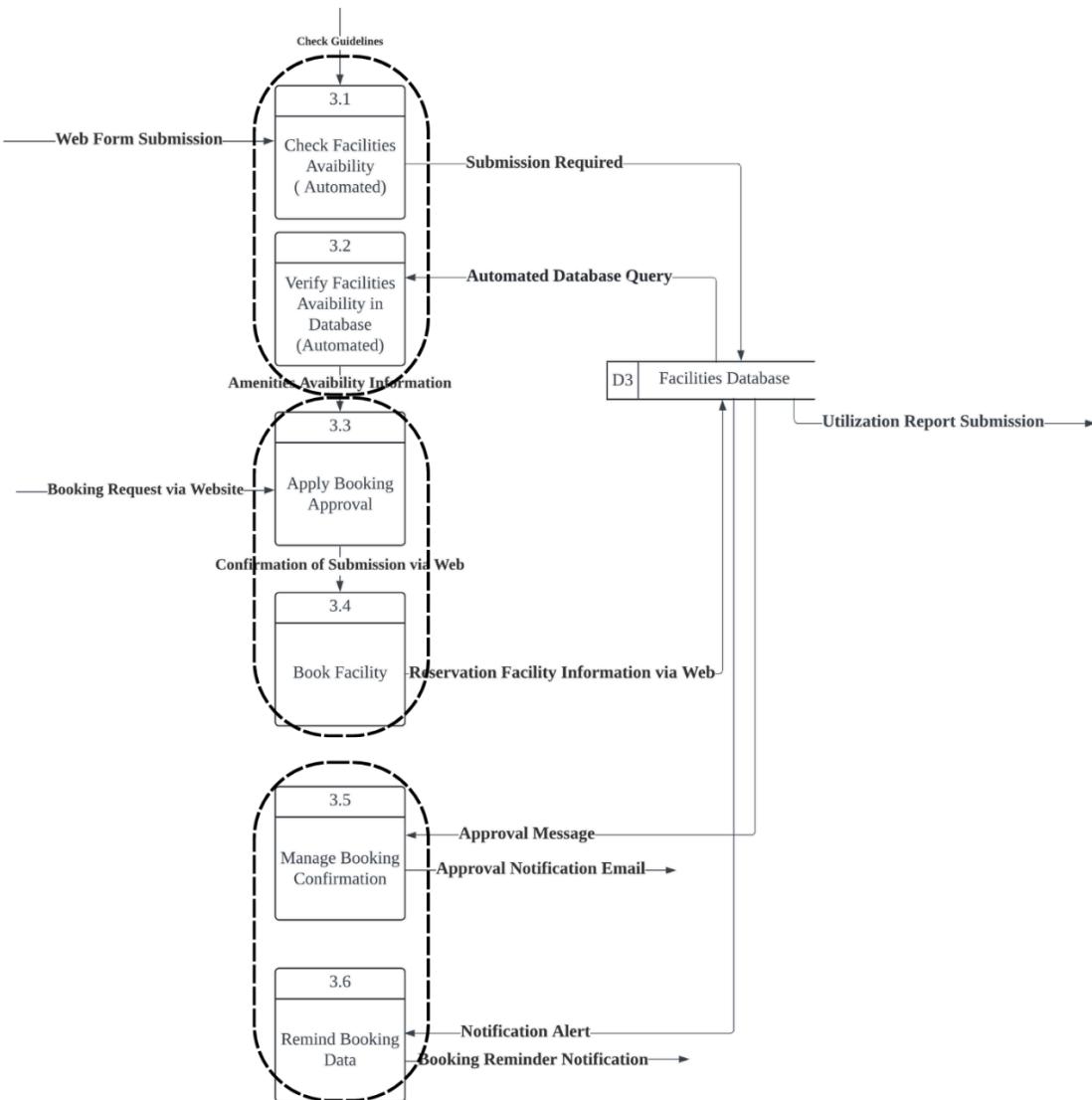
The first partition encloses processes 1.1 and 1.2 as both interact with the User's Account Database and are interdependent.

### 7.1.3.3 Process 2: Update System Guidelines (Automated)



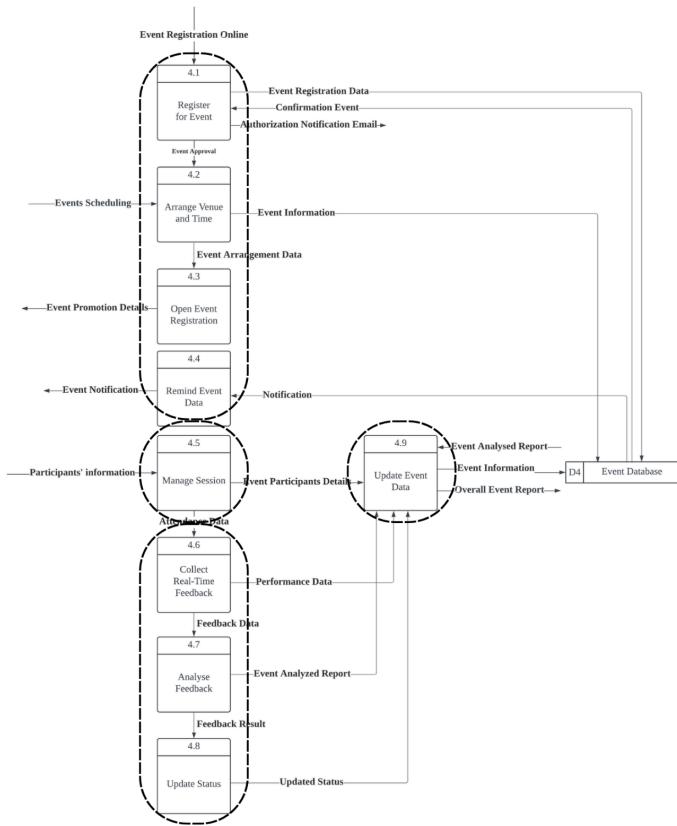
- The first partition encloses processes 2.1 and 2.2 as creation and review are more collaborative and involve input from various stakeholders.
- The second partition encloses processes 2.3 and 2.4 as finalisation and sharing are more about approval and communication.

#### 7.1.3.4 Module 1: Check and Update in Website



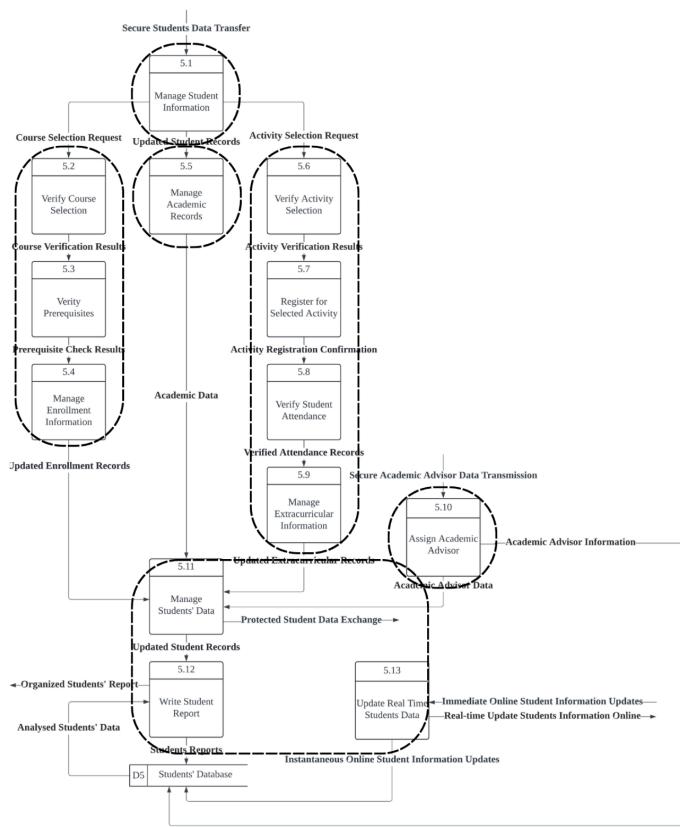
- The first partition encloses processes 3.1 and 3.2 as both perform similar tasks and can be handled by a single computer program.
- The second partition encloses processes 3.3 and 3.4 as combining both ensures a smooth workflow from booking request to approval and actual booking.
- The third partition encloses processes 3.5 and 3.6 as both share a similar task of handling post-booking activities and notifications, which can be efficiently managed together.

### 7.1.3.5 Module 2: Administer Events In Website



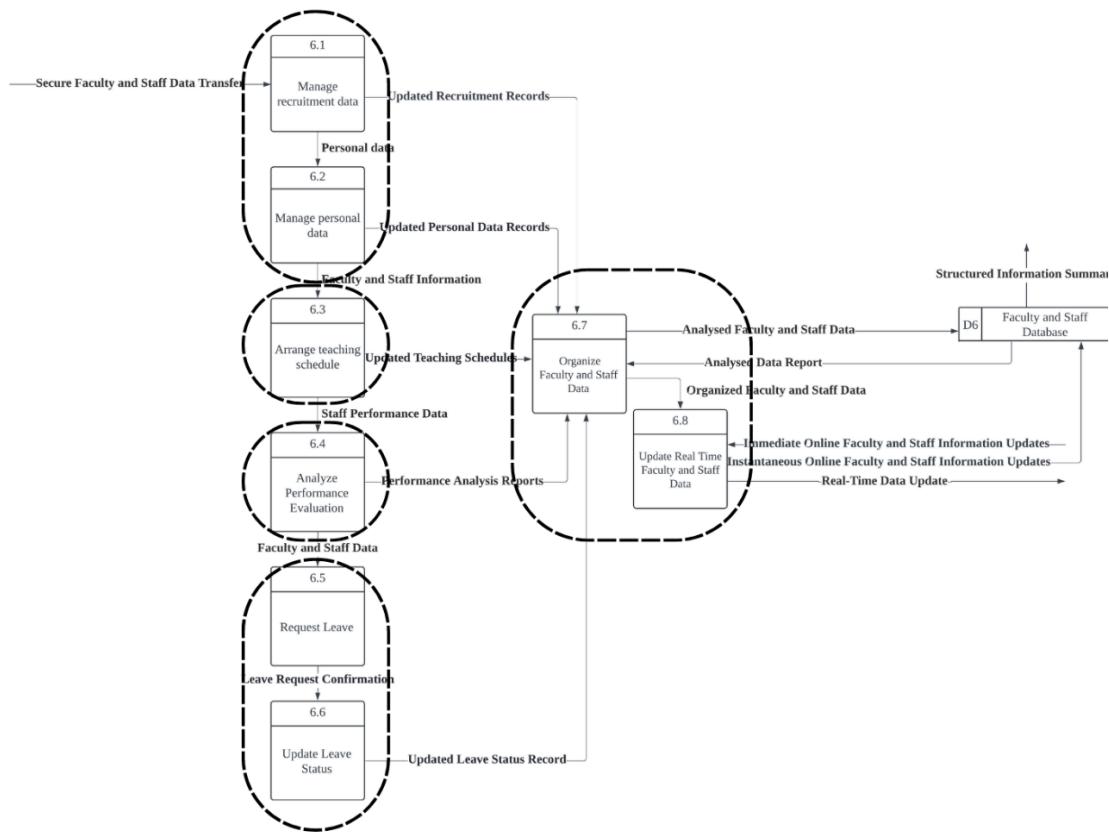
- The first partition encloses processes 4.1, 4.2, 4.3 and 4.4 as all involve the initial registration and scheduling of events.
- The second partition encloses process 4.5 as it involves the management of the real-time session.
- The third partition encloses processes 4.6, 4.7 and 4.8 as all involve gathering performance data and updating event status based on feedback.
- The fourth partition encloses process 4.9 as it involves updating event-related data and generating reports.

### 7.1.3.6 Module 3: Supervise Student Data



- The first partition encloses process 5.1 as it involves the management of general student information.
- The second partition encloses processes 5.2, 5.3 and 5.4 as all involve the management of student course enrollment.
- The third partition encloses process 5.5 as it involves the management of academic records.
- The fourth partition encloses processes 5.6, 5.7, 5.8 and 5.9 as all involve the management of student extracurricular activities.
- The fifth partition encloses processes 5.10 as it involves the assignment of an academic advisor.
- The fourth partition encloses processes 6.11, 6.12 and 6.13 as all involve the updating of student data and generating reports.

### 7.1.3.7 Module 4: Manage Faculty and Staff Data



- The first partition encloses processes 6.1 and 6.2 as both represent the management of recruitment and personal data for faculty and staff.
- The second partition encloses process 6.3 as it involves the arrangement of teaching schedules.
- The third partition encloses process 6.4 as it involves the analysis of performance data.
- The fourth partition encloses processes 6.5 and 6.6 as both represent the handling of leave requests and updates.
- The fifth partition encloses processes 6.7 and 6.8 as both represent the organisation and real-time updating of faculty and staff data.

#### 7.1.4 CRUD Matrix

Activity	User's Account Data	Guidelines Data	Facilities Data	Event Data	Student's Data	Faculty and Staff Data
Create User Account	C					
Login to User Account	R					
Set Guidelines		C				
View Guidelines		R				
View Facilities			R			
Book Facility			C			
View Booking			R			
Register an Event				C		
View Events				R		
Register for an Event				C		
Give Feedback for an Event				U		
Create Student Record					C	
View Courses					R	
Enrol in Course					U	
View Course Enrollment					R	
Update Student Academic Records					U	
View Academic Records					R	
View Extracurricular Activities					R	
Attend Activity					U	
Create Faculty/Staff Record						C
Update Faculty/Staff Data						U
View Faculty/Staff Data						R
View Teaching Schedule						R
View Performance Data						R
Request for a Leave						U
View Leave Status						R

\*Note that 'user' includes admins, faculty/staff, and students.

### 7.1.5 Event Response Table

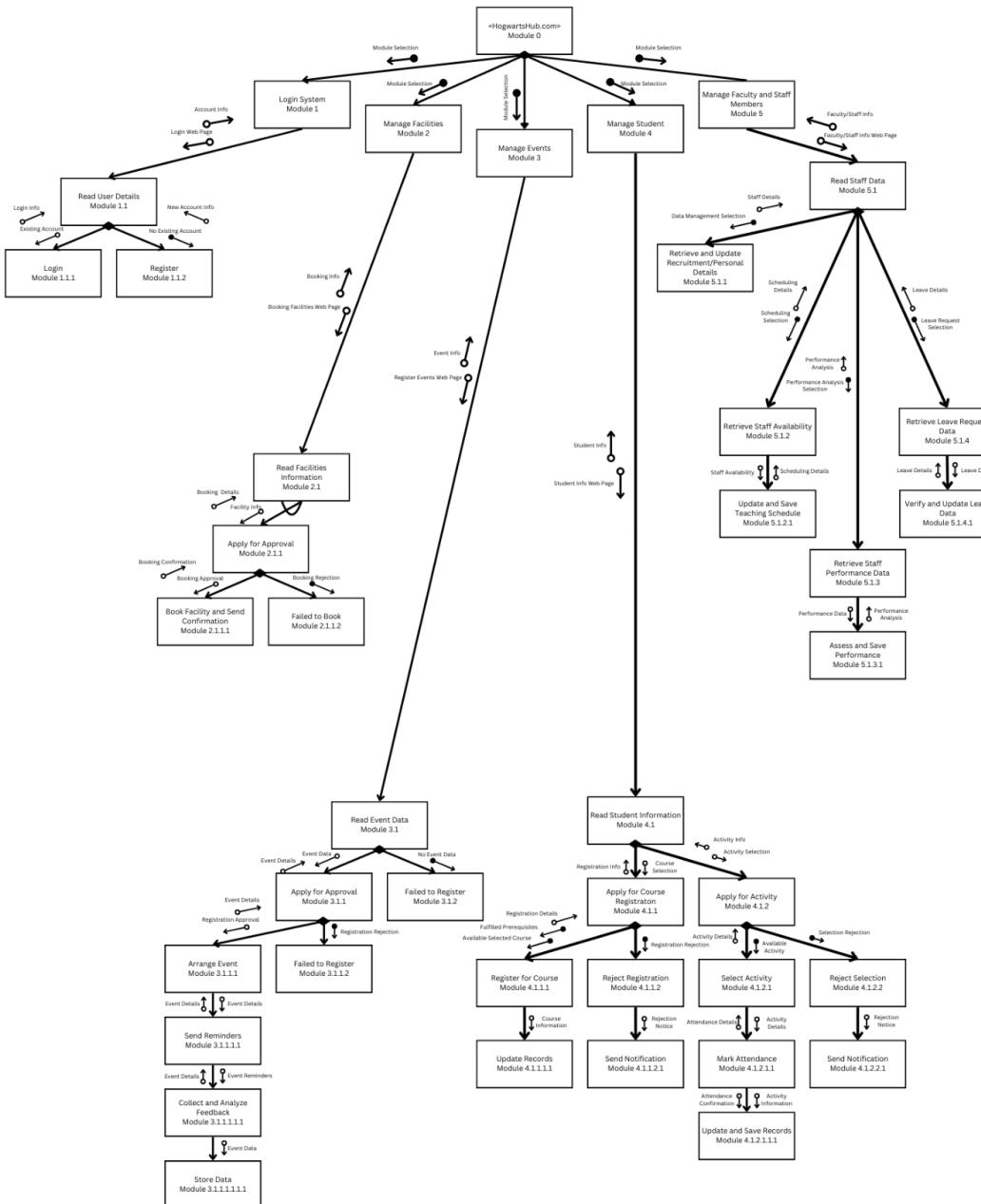
Event	Source	Trigger	Activity	Response	Destination
User Creates Account	User	Clicks “Create Account” on Login WebPage  (User ID and Password)	Store user details and send Dashboard Web page	Dashboard Web Page	User
Login to User Account	User	Clicks “Login” on Login Web Page  (User ID and Password)	Find user record, verify password and send Dashboard Web Page	Dashboard Web Page	User
Set Guidelines	Admin	Guidelines	Store guidelines	Guidelines	Guidelines Data
View Guidelines	User	Clicks “View Guidelines” button on Web Page	Find guidelines and send Guidelines Response Web Page	Guidelines Response Web Page	User
View Facilities	User	Clicks “View Facilities” button on Booking Facility Web Page	Find facilities, availability and send Facility Utilisation Table Web Page	Facility Utilisation Table Web Page	User
Book Facility	User	Clicks “Book Facility” on Booking Facility Web Page  (Facility Selected and Timeslot)	Store booking details and send Booking Confirmation Web Page	Booking Confirmation Web Page	User
View Booking	User	Clicks “View Bookings” button on Booking Facilities Web Page	Find bookings and send Bookings Response Web Page	Bookings Response Web Page	User
Register an Event	User	Clicks “Register Event” on Register Event Web Page  (Event Name, Date and Location)	Store Event Details	Event Details	Event Data
View Events	User	Clicks the “View Events” button on Register Events Web Page	Find events and send Upcoming Events Table Web Page	Upcoming Events Table Web Page	User
Register for an Event	User	Clicks “Register for Event” on Register Events Web Page  (Event Selected and Attendee Details)	Store registration details and send Registration Confirmation Web Page	Registration Confirmation Web Page	User
Give Feedback for an Event	User	Event Feedback	Store Feedback	Feedback	Event Data

Create Student Record	Faculty/Staff	Create Student Record (Student Details)	Store Student Details	Student Details	Student's Data
View Student information	User	Clicks "View Student Information" button on Web Page	Find student information and send Student Info Web Page	Student Info Web Page	User
View Courses	User	Clicks "View Courses" button on Register Course Web Page	Find courses and send Courses Response Web Page	Courses Response Web Page	User
Enrol in Course	User	Clicks on course selected on Register Course Web Page	Store Course Details	Course Details	Student's Data
View Course Enrollment	User	Clicks "View Courses Enrolled" button on Register Course Web Page	Find courses enrolled and send Courses Enrolled Response Web Page	Courses Enrolled Response Web Page	User
Update Student Academic Records	Faculty/Staff	Update Student Record  (Student Details, Academic Records)	Store Student Academic Records	Student Academic Records	Student's Data
View Academic Records	User	Clicks "View Academic Records" button on Web Page	Find academic records and send Academic Records Response Web Page	Academic Records Response Web Page	User
View Extracurricular Activities	User	Clicks "View Activities" button on Web page	Find activities and send Activities Response Web Page	Activities Response Web Page	User
Attend Activity	User	Scans activity attendance	Store attendance	Attendance	Student's Data
Create Faculty/Staff Record	Admin	Clicks "Create Faculty/Staff Record" on Register Staff Web Page  (Faculty/Staff Details)	Store Faculty/Staff Details	Faculty/Staff Details	Faculty/Staff Data
Update Faculty/Staff Data	Faculty/Staff	Clicks "Update Faculty/Staff Record" on Key In Grades Page  (Faculty/Staff Details)	Store updated Faculty/Staff Details	Updated Faculty/Staff Details	Faculty/Staff Data
View Faculty/Staff Information	Faculty/Staff	Clicks "View Faculty/Staff Information" button on Web Page	Find faculty/staff data and send Faculty/Staff Info Web Page	Faculty/Staff Info Web Page	Faculty/Staff

View Teaching Schedule	Faculty/Staff	Clicks “View Teaching Schedule” button on Web Page	Find teaching schedule and send Staff Schedule Timetable Web Page	Staff Schedule Timetable Web Page	Faculty/Staff
View Performance Data	Faculty/Staff	Clicks “View Performance Data” button on Web Page	Find performance data and send Performance Data Response Web Page	Performance Data Response Web Page	Faculty/Staff
Request for a Leave	Faculty/Staff	Apply for Leave (Faculty/Staff details, Leave Details)	Store Leave Details	Leave Details	Faculty/Staff Data
View Leave Status	Faculty/Staff	Clicks “View Leave Status” button on Web Page	Find leave status and send Leave Status Response Web Page	Leave Status Response Web Page	Faculty/Staff

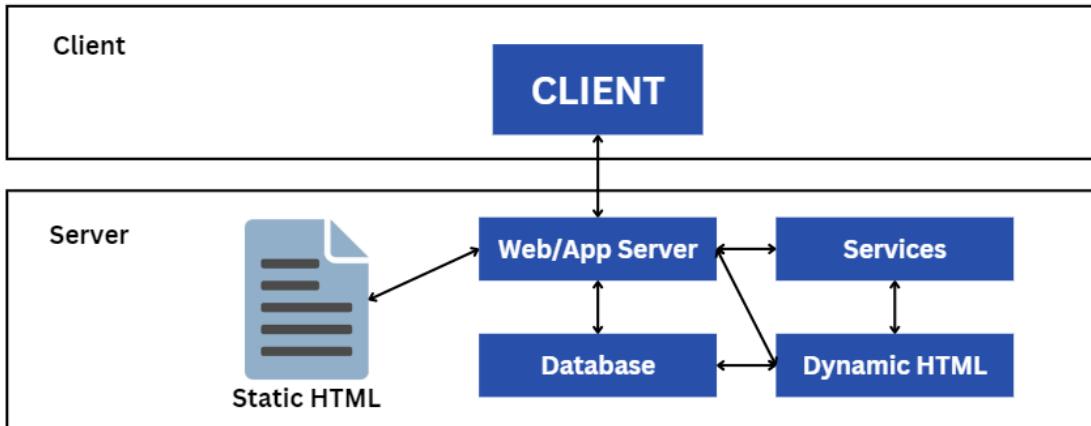
\*Note that ‘user’ includes admins, faculty/staff, and students.

## 7.1.6 Structure Chart

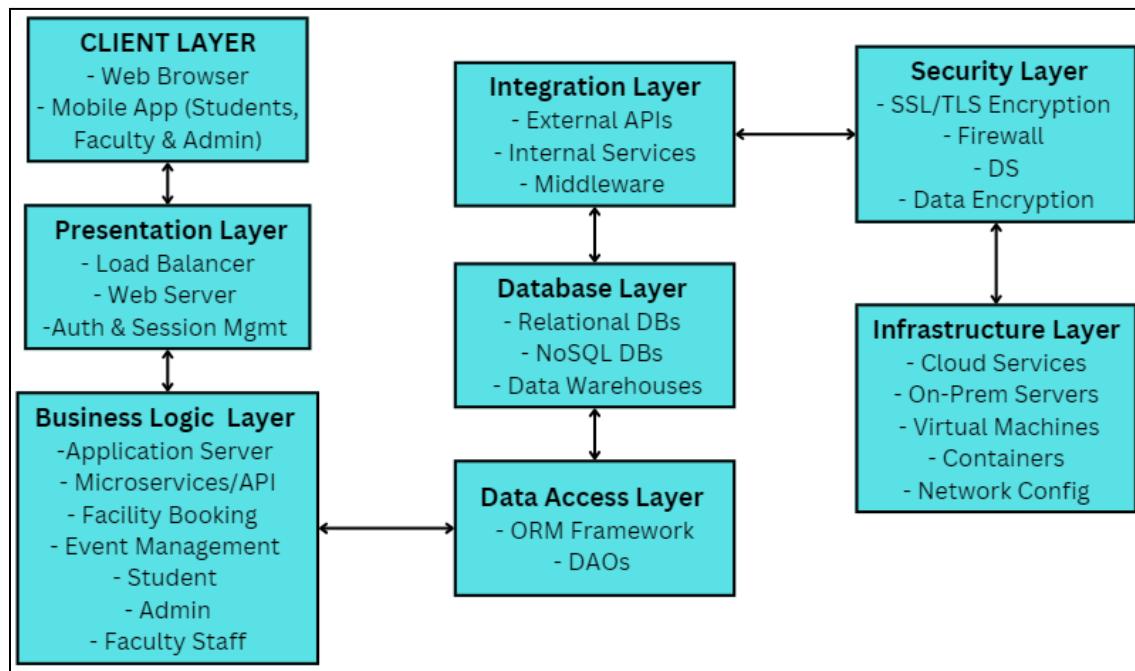


### 7.1.7 System Architecture

Client/Server (2-Layer)



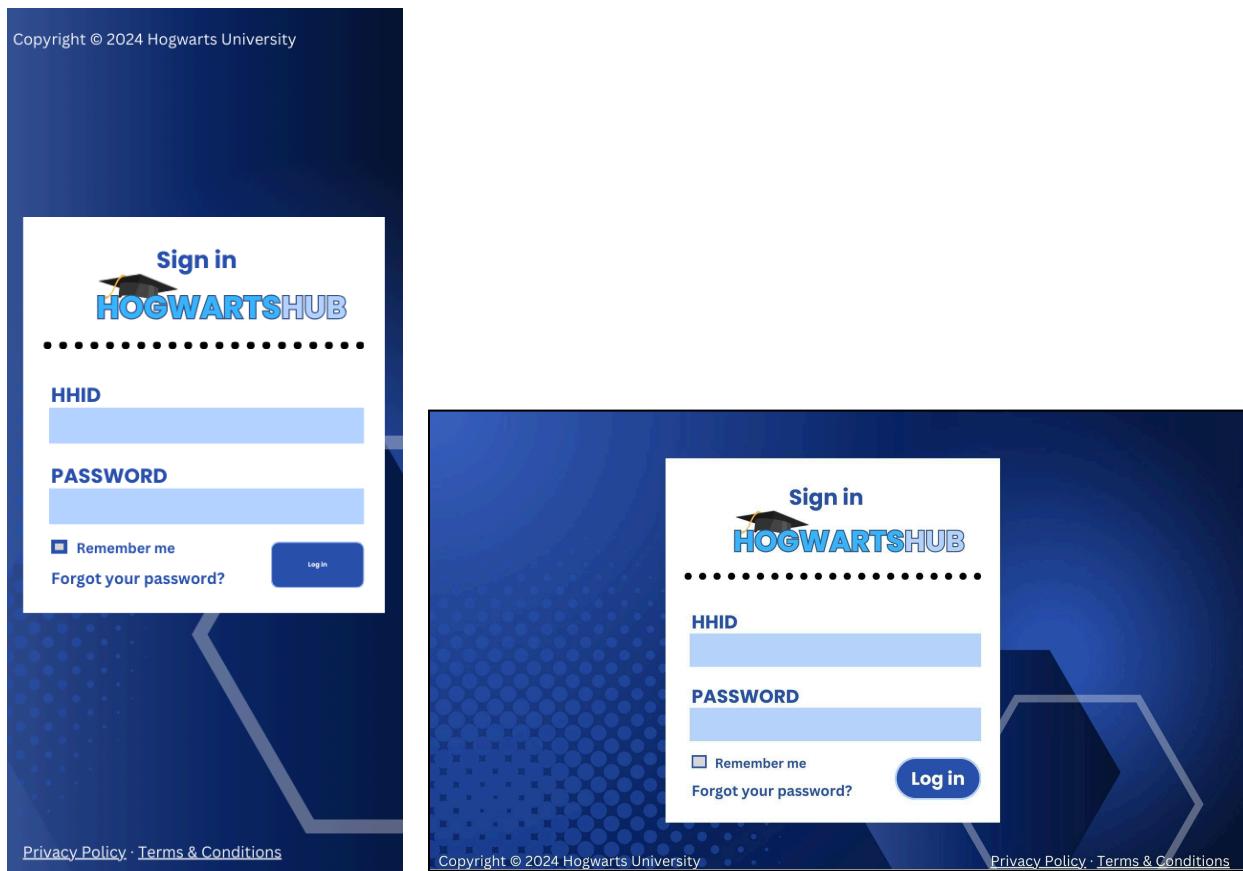
System Architecture Diagram:



## 8.0 System Wireframe

### 8.1 Input Design

Login Screen:



Staff Detail Input Screen:



## Faculty Computing Staff Detail (Total : 45)

≡

🔍

Scan HHID

**Information**



HHID

Yap

En Thong

**Staff Since** 2022-04-15

**Active Schedule**

**Schedule**

**Outstanding Payment** RM 0

+ Edit

**Attendance**

**Payroll**

**Date of Birth** yyyy-mm-dd

**Bank Name** AmBank Berhad

**Country** Malaysia

**Bank Type** Saving Account

**State** Selangor

**Bank Account No.** 1501054697478

**Postal Code** 41200

**Flash Note**

**City** Klang

**Address** 1, Jalan Amal

**Emergency Contact#** +6019-9996785

**Mobile#** +6019-9999886

**Name** Yap Kim Hock

**Work#**

**Relation** Father

**Email** t04@graduate.hh.my

**Gender** Male Female

Excluded from payroll  
 Don't send automated email

**Performance**

**Training&Dev**

**Messages**

**Help**

+ Add new staff
Email
Save
Delete
Close

Booking Facility Input Screen:



## Faculty Computing Facility Management

≡

[Home](#) | [My Bookings](#) | [New Booking](#) | [Help](#) | [Profile](#)

Scan HHID

**New Booking**



S22CS0999

Yap

En Thong

**Staff Since** 2022-04-15

**Active Schedule**

**History**

**Outstanding Payment** RM 0

Log Out

**Booking Approval**

**Payroll**

**Date Selection** yyyy-mm-dd

**Recurring Booking**  Weekly  
 Monthly

**Facility Type** Classroom

**Equipment needed**  Projector  
 Sound System

**View Availability**

**Select Time** 1400 - 1600

**Deposit Charge(RM)** 100

**Notice**

**Booking Title** Replacement COA Class

**Upload Receipt** ambank.pdf

**Feedback**

**Purpose** To replace section 15 COA class on Tuesday

**Booking Confirmation :** Email SMS

**Help**

**Additional Notes** Involve 40 students

**Public/Private Event :** Public Private

**Contact#** +6019-9999886

**Email** t04@graduate.hh.my

Submit
Delete
Close

53

## Course Registration Input Screen:

**Faculty Computing  
Course Registration**

Home | Browse Courses | My Courses | Registration | Profile

Course Registration-->Add Course

Registration		A23CS0284	Study Mode	Taught Course																																
Timetable		Yap	Year of Study/Course Code	1/SECJH																																
Course Offered		Untung	Semester	2/20232024																																
Registration Schedule	1/20242025																																			
Registration Status	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Code</th> <th>Section</th> <th>Course</th> <th>Credit</th> <th>Exam Type</th> <th>Method</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SECD1123</td> <td>07</td> <td>Software Engineering</td> <td>03</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>SECJ2223</td> <td>09</td> <td>Daa Analysis</td> <td>03</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>ULRF2523</td> <td>16</td> <td>Ethics</td> <td>02</td> <td>NFE</td> <td>FC</td> <td></td> </tr> </tbody> </table>				No.	Code	Section	Course	Credit	Exam Type	Method	Action	1	SECD1123	07	Software Engineering	03				2	SECJ2223	09	Daa Analysis	03				3	ULRF2523	16	Ethics	02	NFE	FC	
No.	Code	Section	Course	Credit	Exam Type	Method	Action																													
1	SECD1123	07	Software Engineering	03																																
2	SECJ2223	09	Daa Analysis	03																																
3	ULRF2523	16	Ethics	02	NFE	FC																														
My Courses					Total Credit : 8																															
Remarks																																				
Help																																				

Enter Course Code :    + Add Course  
 Select Section

Submit Delete Close

## Event Registration Input Screen:

**Faculty Computing  
Event Management**

Home | Events | Participants | Reports | Settings |

Course Registration-->Add Course

Register Event		A23CS0284	Study Mode	Taught Course
Upcoming Event		Yap	Year of Study/Course Code	1/SECJH
Participants		Untung	Semester	2/20232024
Registration Schedule				
Location Availability	Date Selection <input type="text" value="yyyy-mm-dd"/>	Event Type <input type="button" value="Workshop"/>	Event Organiser <input type="text" value="AIROST CLUB HOGWARTS"/>	
Promotion	Select Time <input type="button" value="1400 - 1600"/>	Contact# <input type="text" value="+6019-9999886"/>	Tags <input type="text" value="#WORKSHOP #AIROST"/>	
Feedback	Event Title <input type="text" value="AI UNO DETECTOR"/>	Registration Form <input type="button" value="Attachment"/>		
Event Approval Status	Description <input type="text" value="Train AI module on self learning and detecting UNO card pattern"/>	Registration Option <input checked="" type="checkbox"/> Enable Registration		
Help	Location <input type="text" value="DK6, PT9"/>	Allow Multiple Guests <input type="radio"/>		

Capacity  Save as Draft  
 Registration Deadline   
Submit Delete Close

## 8.2 Output Design

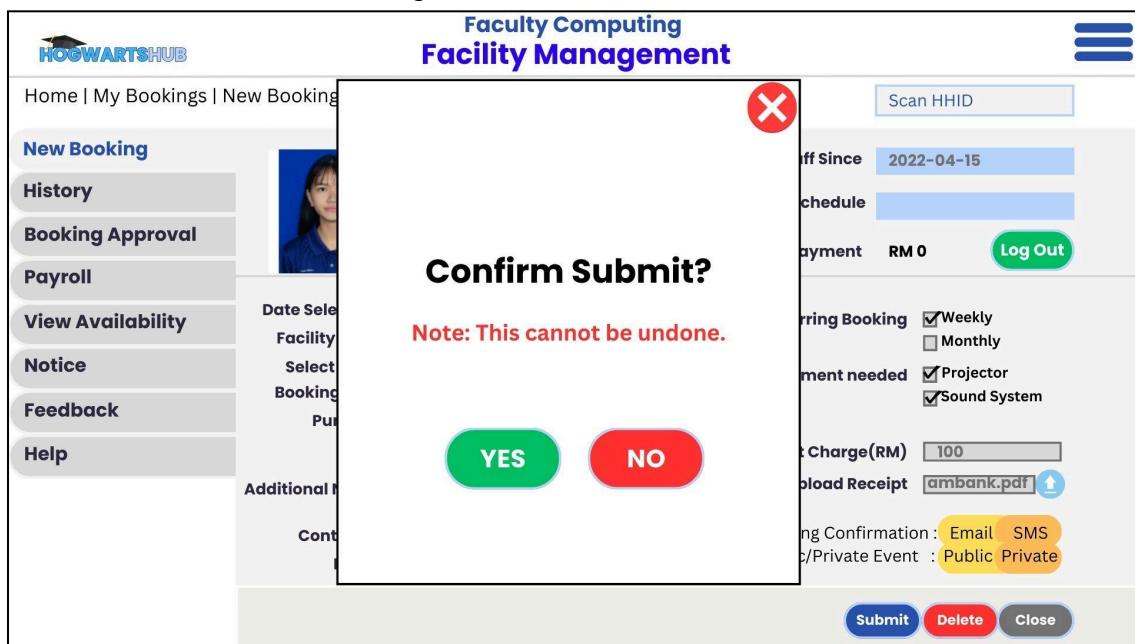
Main Dashboard:

The screenshot shows the main dashboard of the HOGWARTSHUB system. At the top, there's a header with the HOGWARTSHUB logo, a smiley face icon, and a search bar. Below the header, a purple banner displays a welcome message "Hi, Untung" and various statistics: Financial Status (RM 0.00), Library Fine (RM 0.00), Semester (20240251, 3/8), Credit Counted (TOTAL 14/131, 4 Award). To the right is a profile picture of a woman. On the left, a sidebar lists navigation links: Profile, Dashboard, Digital Experience, My Event, My Course, Hogwarts Bus, ICT Services, Software Centre, Hogwarts Library, Faculty & School Achievement, E-Candidates, PayHub, Fundraising, Staff Directory, Campus Life, and Quick Links. Social media icons for Facebook, Twitter, Instagram, LinkedIn, and YouTube are at the bottom of the sidebar. The central content area features a news card for "Airost BUILDING A UNO CARD DETECTOR WITH YOLOV8 CAREER READINESS SHARING" featuring a speaker named Shaun Liew. It includes a QR code, event details (MAR 23 | SAT, 9AM TO 12PM, P19 DK4), and a call to action: "STAND A CHANCE TO WIN LUCKY DRAW PRIZES UP TO RM250++". Below the news card are icons for a bell, envelope, report, heart, and plus sign. To the right, there are sections for "News" (Hogwarts' Airost Team Clinches 3rd Consecutive NIARC Championship...), "Upcoming Event" (AI UNO DETECTOR), and "Academic Calender" (listing Diploma, Bachelor & Postgraduate Program, and UTMSPACE). A "FORM" section is also present at the bottom.

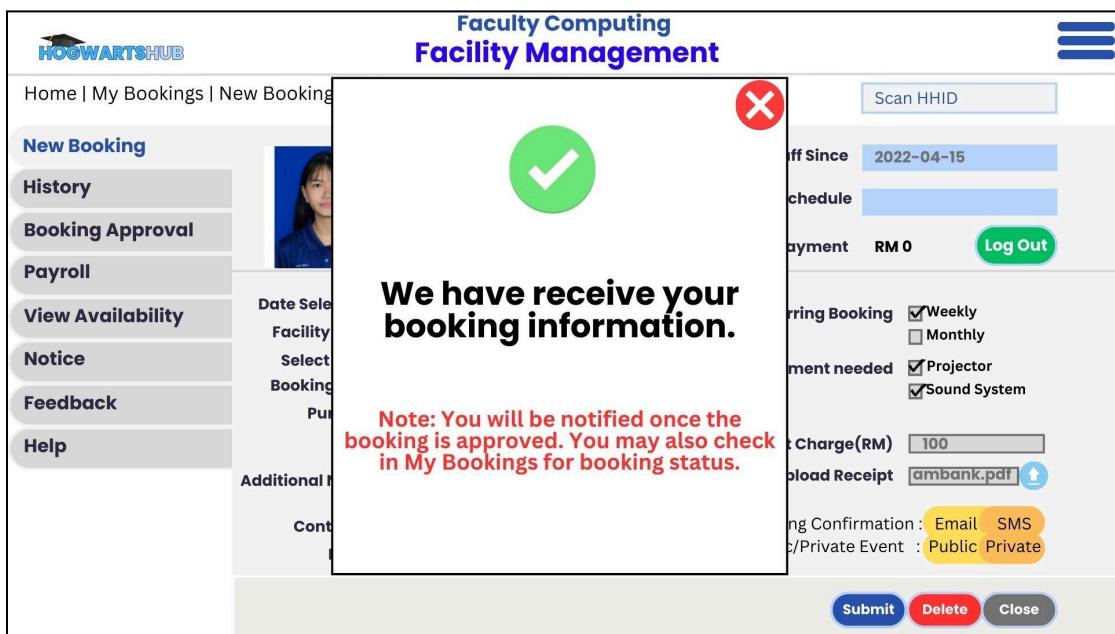
Notification on new staff added output screen

The screenshot shows a modal window titled "Faculty Computing Staff Detail (Total : 45)". The modal has a red "X" button in the top right corner. Inside the modal, a large green banner at the top says "NEW STAFF ADDED!" and "Click here to download". The main form contains fields for staff details: Name (AmBank Berhad), Type (Saving Account), Account No. (1501054697478), Note, Excluded from payroll (unchecked), Don't send automated email (unchecked), Contact# (+6019-9996785), Name (Yap Kim Hock), and Relation (Father). There are buttons for "+ Add new staff", "Email", "Save" (blue), "Delete" (red), and "Close". On the left side of the modal, there's a sidebar with links: Information, Schedule, Attendance, Payroll, Performance, Training&Dev, Messages, and Help. A small profile picture of a person is also visible.

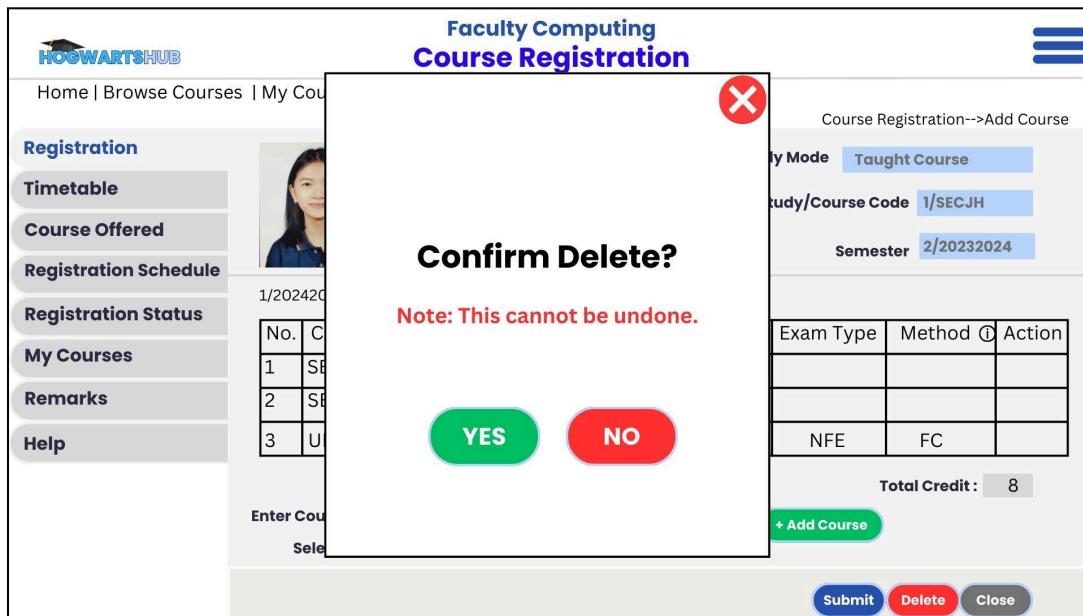
Confirmation on submission output screen:



Notification on receiving booking information output screen:



Confirmation on deleting input output screen:



Course Registration Slip Output Screen:

1/18/24, 3:16 PM		HOGWARTS UNIVERSITY - Course Registration Slip				
		<b>HOGWARTS UNIVERSITY</b> ACADEMIC MANAGEMENT DIVISION (UNDERGRADUATE) 81310 HOGWARTS UNIVERSITI, JOHOR BAHRU, JOHOR,MALAYSIA. (COURSE REGISTRATION SLIP)				
FACULTY : FACULTY COMPUTING NAME : YAP UNTUNG NRIC : 040415131234 ADDRESS : 1, JALAN AMAL, BANDAR PUTERI, 41200 KLANG, SELANGOR.			SESSION/SEMESTER : 202320241 YEAR/PROGRAMME : 1 SECJH HHID : A23CS0284			
NO.	CODE	COURSE TITLE	LEARNING METHOD	EXAM TYPE	SECTION	CREDIT STATUS
1	SECI1013	DISCRETE STRUCTURE			08	03
2	SECJ1013	PROGRAMMING TECHNIQUE I			09	03
3	SECP1513	TECHNOLOGY AND INFORMATION SYSTEM			05	03
4	SECR1013	DIGITAL LOGIC			09	03
5	ULRS1032	INTEGRITY AND ANTI-CORRUPTION COURSE	FC	NFE	03	02
<b>TOTAL CREDIT REGISTERED</b>			014			
<b>TOTAL CREDIT TRANSFERED</b>			000			
TOTAL CREDIT REGISTERED 014 TOTAL CREDIT TRANSFERED 000						
VERIFICATION FROM ACADEMIC ADVISOR VERIFIED BY : DATE VERIFIED : REMARKS :						
DATE : 18-JANUARY-2024 NOTE : PLEASE CHECK YOUR NAME AND ADDRESS. CORRECTIONS CAN BE MADE AT YOUR FACULTY/SCHOOL.						
<b>Learning Method Definition:</b> OL = Online Learning FC = Face to face BL = Blended Learning (Starts with online learning followed by face to face) BLS = Blended Learning Substitution		<b>Examination Type Definition:</b> AA = Alternative Assessment NFE = No Final Exam <b>ASYNC O</b> = Asynchronous online exam <b>SYNC O</b> = Synchronous online exam; no invigilation and no proctoring <b>SYNC OP</b> = Synchronous online exam using online proctoring		– <b>SYNC OV</b> = Synchronous online exam with online invigilation <b>SYNC P</b> = Synchronous online exam with physical invigilation <b>FTF</b> = Face-to-face final exam		
<a href="https://academic.hogwartsuni.my/UGStudent/course-registration-slip.aspx">https://academic.hogwartsuni.my/UGStudent/course-registration-slip.aspx</a>						
1/1						

## Event Information Slip:

1/18/24, 3:19 PM	HOGWARTS UNIVERSITY - Event Information Slip
<p><b>HOGWARTSHUB</b></p> <p>HOGWARTS UNIVERSITY ACADEMIC MANAGEMENT DIVISION (UNDERGRADUATE) 81310 HOGWARTS UNIVERSITI, JOHOR BAHRU, JOHOR, MALAYSIA. (EVENT INFORMATION SLIP)</p>	
EVENT NO: 153475372386	Slip no: SN/8120173131
	
<p>EVENT NAME : AI UNO DETECTOR DATE : 23th March 2023 TIME : 0900H - 1200H LOCATION : HOGWARTS UNIVERSITY P19, DK4 ORGANISED BY : AIROST CLUB HOGWARTS</p>	
<p><b>DESCRIPTION:</b> JOIN US FOR THE AI UNO DETECTOR WORKSHOP WHERE STUDENTS CAN LEARN MACHINE LEARNING USING YOLO V8 AND BUILD THEIR OWN UNO DETECTOR. THE EVENT AIMS TO FOSTER A SPIRIT OF INQUIRY AND DISCOVERY.</p>	
<p><b>Schedule:</b> 09:00 AM - Opening Ceremony 09:15 AM - Guest Lectures 10:00 PM - Lunch Break 11:00 PM - Practical 11:30 PM - Award Ceremony 12:00 PM - Closing Remarks</p>	
<p><b>SPEAKERS/GUESTS:</b> - DR. SHAWN LIEW <b>EXPECTED ATTENDEES:</b> 150</p>	
<p><b>REGISTRATION:</b> <a href="https://form.ai-uno-detector.hogwartshub.my">HTTPS://FORM/AI-UNO-DETECTOR.HOGWARTSHUB.MY</a> <b>STATUS:</b> OPEN [REGISTER NOW BUTTON] <b>REGISTRATION DEADLINE:</b> JULY 10, 2024</p>	
<p><b>CONTACT US:</b> EMAIL: AIROST @HOGWARTS.EDU PHONE: (123) 456-7890 SOCIAL MEDIA: [FACEBOOK] [INSTAGRAM] @AIROSTHOGWARTS</p>	
<p><a href="https://event-management.hogwartsuni.my/myevent/event-info-slip.aspx">https://event-management.hogwartsuni.my/myevent/event-info-slip.aspx</a>      1/1</p>	

## Facility Booking Confirmation Output Screen:

<p>HogwartsHub.com Booking Confirmation</p> <p>Hello Yap En Thong, your booking has been successfully confirmed.</p> <p></p> <p><b>Booking Details:</b></p> <ul style="list-style-type: none"><li>- Facility: Classroom</li><li>- Date: 2022-04-15</li><li>- Time: 14:00 - 16:00</li><li>- Purpose: Replacement COA Class</li></ul> <p><b>Contact Information:</b></p> <p>For any queries, please contact us at +6019-9999886 or email t04@graduate.hh.my.</p> <p>Thank you for using HogwartsHub.com!</p>	<p>SMS OUTPUT SCREEN</p>
---	--------------------------

## Staff Information Output Screen:

1/18/24, 4:19 PM	HOGWARTS UNIVERSITY - Staff Information Slip																				
<p></p> <p>HOGWARTS UNIVERSITY ACADEMIC MANAGEMENT DIVISION (UNDERGRADUATE) 81310 HOGWARTS UNIVERSITI, JOHOR BAHRU, JOHOR,MALAYSIA. (STAFF INFORMATION SLIP)</p> <p>Slip no: SPN/9118231</p>																					
	<table border="1"><tr><td>HHID: S22CS0999</td><td>YAP EN THONG</td></tr><tr><td>STAFF SINCE: 2022-04-15</td><td>ACTIVE SCHEDULE</td></tr><tr><td>OUTSTANDING PAYMENT: RM 0</td><td></td></tr></table>	HHID: S22CS0999	YAP EN THONG	STAFF SINCE: 2022-04-15	ACTIVE SCHEDULE	OUTSTANDING PAYMENT: RM 0															
HHID: S22CS0999	YAP EN THONG																				
STAFF SINCE: 2022-04-15	ACTIVE SCHEDULE																				
OUTSTANDING PAYMENT: RM 0																					
<table border="1"><tr><td>DATE OF BIRTH</td><td>2004-04-24</td></tr><tr><td>COUNTRY</td><td>MALAYSIA</td></tr><tr><td>STATE</td><td>SELANGOR</td></tr><tr><td>POSTAL CODE</td><td>41200</td></tr><tr><td>CITY</td><td>KLANG</td></tr><tr><td>ADDRESS</td><td>1, JALAN AMAL</td></tr><tr><td>MOBILE#</td><td>+6019-9999886</td></tr><tr><td>WORK#</td><td>+603-12345678</td></tr><tr><td>EMAIL</td><td>T04@GRADUATE.HH.MY</td></tr><tr><td>GENDER</td><td>FEMALE</td></tr></table>		DATE OF BIRTH	2004-04-24	COUNTRY	MALAYSIA	STATE	SELANGOR	POSTAL CODE	41200	CITY	KLANG	ADDRESS	1, JALAN AMAL	MOBILE#	+6019-9999886	WORK#	+603-12345678	EMAIL	T04@GRADUATE.HH.MY	GENDER	FEMALE
DATE OF BIRTH	2004-04-24																				
COUNTRY	MALAYSIA																				
STATE	SELANGOR																				
POSTAL CODE	41200																				
CITY	KLANG																				
ADDRESS	1, JALAN AMAL																				
MOBILE#	+6019-9999886																				
WORK#	+603-12345678																				
EMAIL	T04@GRADUATE.HH.MY																				
GENDER	FEMALE																				
<table border="1"><tr><td colspan="3">EMERGENCY CONTACT INFORMATION</td></tr><tr><td>NAME</td><td>RELATION</td><td>EMERGENCY CONTACT#</td></tr><tr><td>YAP KIM HOCK</td><td>FATHER</td><td>+6019-9996785</td></tr></table>		EMERGENCY CONTACT INFORMATION			NAME	RELATION	EMERGENCY CONTACT#	YAP KIM HOCK	FATHER	+6019-9996785											
EMERGENCY CONTACT INFORMATION																					
NAME	RELATION	EMERGENCY CONTACT#																			
YAP KIM HOCK	FATHER	+6019-9996785																			
<table border="1"><tr><td colspan="3">BANK INFORMATION</td></tr><tr><td>BANK NAME</td><td>AMBANK BERHAD</td><td></td></tr><tr><td>BANK TYPE</td><td>SAVING ACCOUNT</td><td></td></tr><tr><td>BANK ACCOUNT NO.</td><td>150105469748</td><td></td></tr><tr><td colspan="3">EXCLUDED FROM PAYROLL [ <input checked="" type="checkbox"/> ] (CHECKBOX)</td></tr><tr><td colspan="3">DON'T SEND AUTOMATED EMAIL [ <input type="checkbox"/> ] (CHECKBOX)</td></tr></table>		BANK INFORMATION			BANK NAME	AMBANK BERHAD		BANK TYPE	SAVING ACCOUNT		BANK ACCOUNT NO.	150105469748		EXCLUDED FROM PAYROLL [ <input checked="" type="checkbox"/> ] (CHECKBOX)			DON'T SEND AUTOMATED EMAIL [ <input type="checkbox"/> ] (CHECKBOX)				
BANK INFORMATION																					
BANK NAME	AMBANK BERHAD																				
BANK TYPE	SAVING ACCOUNT																				
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## **9.0 Summary of the proposed system**

HogwartsHub.com is an innovative system that aims to modernise and streamline Hogwarts University's administrative processes. This advanced Campus Resource Management System (CRMS) is designed to give students, faculty and administrators a seamless, efficient, and user-friendly experience.

The system's primary goal is to centralise facility booking, providing real-time visibility into resource availability and reducing scheduling conflicts while improving communication. This centralisation will make the booking process more efficient and less prone to error.

In addition to facility booking, HogwartsHub.com will revolutionise event management by streamlining registrations, coordination, and promotion. Automated processes and user-friendly interfaces will replace the current cumbersome methods, reducing manual errors and improving overall event management efficiency.

For example, key features of HogwartsHub.com include an intuitive interface that provides easy access to various functionalities for students, faculty and administrators. Real-time updates and notifications will keep all stakeholders informed promptly about facility availability, event schedules and administrative tasks.

Integrated communication tools will facilitate better coordination among students, faculty and administrators, reducing delays and misunderstandings. Robust security protocols, including password-based logins, will ensure data protection and user authentication. Customizable dashboards for different user roles will display relevant information and tools, enhancing user experience and efficiency.

By centralising data and processes, HogwartsHub.com will improve data accuracy and support better decision-making. The benefits of this system are clear: streamlining administrative tasks and automating processes will save time and reduce the workload for staff and faculty. Real-time updates and centralised data will reduce errors and ensure information is always up-to-date, supporting better decision-making for resource allocation and event planning. User-friendly interfaces and personalised dashboards will enhance the overall experience for students, faculty and administrators.

The system will be implemented in phases to ensure a smooth transition and allow for adjustments based on user feedback. Comprehensive training sessions and ongoing support will be provided to all users to ensure they are comfortable with the new system. Continuous improvement will be a key focus, with user feedback being gathered and used to make enhancements, ensuring the system meets the evolving needs of the university.

In conclusion, HogwartsHub.com is designed to transition Hogwarts University into a modern, efficient institution by leveraging technology to improve administrative processes and enhance the overall experience for all stakeholders.