

## Phase II – Business Process Modeling

**Project Title:** university resource management system

### 1. Business Process Overview

The University Resource Management System (URMS) is designed to streamline and digitize the management of key resources within a university, including classrooms, laboratories, faculty, library assets, and equipment. This system enables administrators to allocate, monitor, and optimize university resources efficiently.

### 2. Scope of the Business Process

**Process Name:** University resource Management Work-flow

#### Objective:

The primary goal of the University Resource Management System is to digitize and streamline the management, booking, and monitoring of university resources such as classrooms, labs, equipment, and other facilities to ensure efficient utilization, transparency, and accountability.

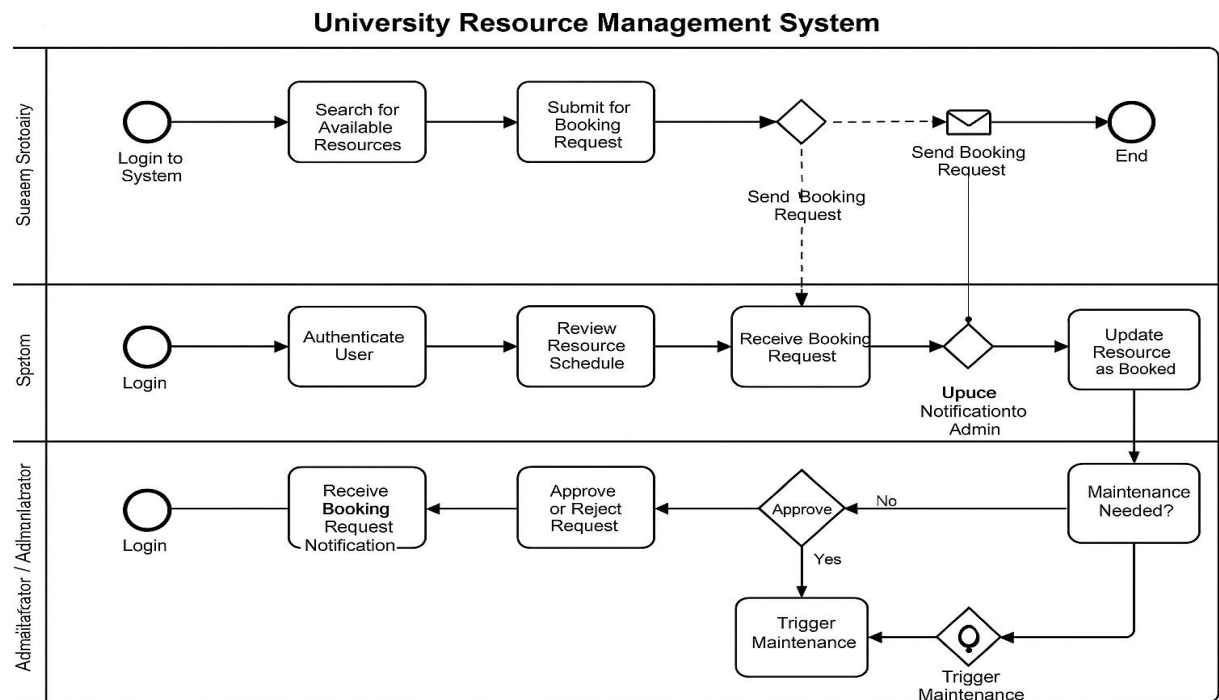
#### Inclusions:

- **User Role Management** for admins, faculty, and students
- **Resource Inventory** for managing classrooms, labs, and equipment
- **Booking System** with real-time availability and conflict checking
- **Calendar Integration** for viewing and managing bookings
- **Notifications** for confirmations, updates, and maintenance alerts
- **Reports and Analytics** for resource usage and booking statistics
- **Maintenance Tracking** for resource upkeep and downtime logging
- **Feedback System** for users to rate and report resource issues
- **Security Features** including login protection and data validation
- **Documentation and Support** for both users and developers

### 3. Key Entities & Roles

| ENTITIES     | DESCRIPTION   |
|--------------|---|
| User         | <b>Represents anyone who logs into the system.</b>              |
| Resource     | <b>Represents any resource that can be managed or booked.</b>   |
| Booking      | <b>Stores all booking requests and statuses.</b>                |
| Department   | <b>Groups resources and users under university departments.</b> |
| Feedback     | <b>Allows users to rate resources and give feedback.</b>        |
| Maintenance  | <b>Tracks issues and maintenance activity for resources.</b>    |
| Notification | <b>Sends alerts related to bookings and resource updates.</b>   |

## . BPMN Diagram (Workflow Description)



### Swimlanes:

#### Student / Faculty

- Logs in to the system
- Searches for available resources
- Submits booking request
- Receives booking confirmation or notification

#### 2. System

- Authenticates users
- Displays resource availability
- Stores booking requests
- Sends notifications
- Updates resource status

#### 3. Administrator / Resource Manager

- Logs in
- Receives booking request notification
- Reviews and approves/rejects request
- Updates booking status
- Triggers maintenance if needed

### MIS Benefits of the System

| MIS PRINCIPLES | HOW THEY ARE IMPLEMENTED |
|----------------|--------------------------|
|----------------|--------------------------|

|   |   |
|---|---|
| <b>MIS must serve the information needs of all levels of management</b>             | <b>Provides dashboards and reports for department heads, administrators, and managers.</b>      |
| <b>MIS should be developed based on the specific needs of users and management.</b> | <b>Reports and alerts are designed based on actual tasks and responsibilities of each role.</b> |
| <b>MIS should support planning and forecasting.</b>                                 | <b>Historical booking data and usage patterns help forecast resource demand</b>                 |