

SWP391

**Report 3 – Software Requirement Specification**

– Danang, April 2023 –

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# Record of Changes

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **A\*, M, D** | **In charge** | **Change Description** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

\*A - Added M - Modified D - Deleted

# Software Requirement Specification

## Product Overview

Nowadays, with the increasing number of students enrolling at FPT University each year, the issue of student accommodation management is becoming crucial. Currently, most accommodation management is done manually using paper-based records and documents, which is time-consuming and prone to errors.

Applying information technology to dormitory management is essential to facilitate easier management, avoid data loss, and enable quick and efficient processing of information with high accuracy. It saves time and effort for managers and enhances the overall experience of students. To address these challenges and provide a more reasonable approach to dormitory management with the application of information technology, we propose developing a Student Dormitory Management System at FPT University.

The Student Dormitory Management System will assist in managing room allocation, accommodation registration, as well as storing and processing information about students and the dormitory situation. It will simplify the management process and save time.

**Figure 1. Overview of FPT Dormitory Management**

## User Requirements

### Actors

|  |  |  |
| --- | --- | --- |
| **#** | **Actor** | **Description** |
| 1 | Guest | Guest is a person who accesses the FPT Dormitory Management system without logging. They have access to the landing page and can view announcements, service and contact information about dormitory. |
| 2 | Student | Students are individuals who have an account in the FPT Dormitory Management system. They have the ability to logging to their account using valid credentials, manage their information, view available rooms and their details (e.g., room types, occupancy, amenities, price,…), reserve a room for a specific academic term and receive confirmation of their room reservation and allocation, check-out from the dormitory at the end of each academic term or when vacating the room, submit maintenance requests, billing and payment, receive important updates, deadlines, and relevant information through the system . |
| 3 | Manager | Manager who have full control over the system such as users’ accounts management, room management, room allocation and assignment in the FPT Dormitory Management system... will be called Manager. |

**Table 1. All actors in the system**

**Guest :**

● Sign up (with ID student)

● View landing page

● View service information page

● View contact information page

● View dormitory rules

**User :**

● Logging (with ID student)

● Manage personal profile (Update or change password for account)

● View all rooms and their details (e.g., room types, occupancy, amenities, price,…)

● View roommates information.

● Search by categories (e.g., gender, room types, occupancy, amenities, price,…)

● Reserve a room for a specific academic term (fill form to provide with necessary information and procedures for the check-in process)

● Billing and payment for a specific academic term (e.g., room before each semester, the amount of electricity and water used by month, water and electric bill after each semester)

● Request to change room with another student

● Submit maintenance or recommendations requests for manager

**Manager :**

● Logging (with Manager ID)

● Manage announcements (CRUD an announcement)

● Manage reserve rooms (change the status of the student's room rental request after the room fee has been paid or delete the request reserve room)

● Manage student information (View all student account and their information – update – delete – search)

● Manage room (CRUD a room)

● Manage collect room fee and other fees (Check the payment status for room fee/electricity fee/water fee, Send total bill)

● Statistic (Total number of rented accommodation (all/male/female), total number of unregistered spaces (all/male/female), total student’s room fees paid)

### Use Cases

* + - 1. *Diagram(s)*

###### Use Case Overview

Below is an overview of the use cases for the FPT Dormitory Management System.

A screenshot of a black screen

Description automatically generated with low confidence

**Figure 2. FPT Dormitory Management System Use Case Diagram**

###### Use Case for Authentication

In the FPT Dormitory Management system, all actors except for guests are required to go through authentication upon entry. This process verifies the identity of the user and ensures that only authorised individuals are granted access. By enforcing authentication, the system can protect sensitive information and prevent unauthorised access.

A picture containing screenshot, circle

Description automatically generated

**Figure 3. Use Case for Authentication**

###### Use Case for Student

Below is a subsystem use case for the Student actor.

A screenshot of a cell phone

Description automatically generated with medium confidence

**Figure 4. Use Case for Student**

###### Use Case Manager

A picture containing screenshot, text, black and white, black

Description automatically generatedBelow is a subsystem use case for the Manager actor.

**Figure 5. Use Case for Manager**

**A picture containing text, diagram, screenshot, parallel

Description automatically generated**