COMSATS University Islamabad Abbottabad Campus

Lab-Assignment # 1

Submitted by:

Sayyam Tahir (SP23-BSE-014)

Section: BSE-5A

Submitted to:

Name: Mukhtiar Zamin

Subject: Software Design and Architecture

Date: May 3, 2025

Use Case Name:

Leaved Employee Management

Primary Actor:

Hostel Manager / Admin

Secondary Actors:

HR (Human Resources), Employee

Stakeholders and Interests:

- **Employee**: Wants their departure to be processed properly, with appropriate records and clearances.
- **Hostel Manager / Admin**: Responsible for processing the departure, updating records, and managing any necessary follow-up actions.
- **HR (Human Resources)**: Manages employee status and exit formalities, including final payments and settlement of dues.

Preconditions:

1. The employee has been registered in the hostel management system and has all relevant details (e.g., role, room allocation, employment status) recorded.
2. The employee has provided formal notice or communicated their departure intention to HR and the hostel management team.
3. The employee's departure has been approved by the relevant parties (HR, Hostel Manager, etc.).
4. The system is functioning, and the user (Hostel Manager/Admin) is logged in with proper permissions.

Postconditions:

1. The employee's status is updated to **"Leaved"** in the system.
2. The employee's **room and facilities** (if applicable) are marked as vacated.
3. The employee's **attendance and payroll records** are updated.
4. Any **pending dues**, payments, or clearances are flagged or settled.
5. A **confirmation notification** is sent to the employee, HR, and the hostel management team.
6. The employee's data is **archived** for future reference and compliance purposes.
7. A report is generated for **leaved employees** for record-keeping and audits.

Main Success Scenario (Basic Flow):

1. **Trigger:** The employee notifies HR or the hostel management team of their intention to leave (e.g., resignation, end of contract, retirement).
2. **HR/Hostel Manager Action:**
   - The HR or Hostel Manager logs into the system and navigates to the **Employee Management** section.
   - The system prompts for the **employee's name or ID** to locate their records.
   - The system displays the employee's profile, including **room allocation**, **work history**, **attendance**, and **payroll details**.
3. **HR/Hostel Manager Updates Employee Status:**
   - The HR/Hostel Manager selects the **Leaved Employee** option.
   - The system prompts the HR/Hostel Manager to confirm the **departure date** and **reason for departure** (e.g., resignation, contract completion, retirement).
   - The HR/Hostel Manager confirms and updates the employee's status to **Leaved**.
4. **Room and Facilities Update:**
   - The system automatically marks the employee's **room** (if allocated) and any other facilities (e.g., locker, parking) as **vacant**.
   - The system notifies the relevant staff to perform a **room inspection** and **recover any keys** or personal belongings from the employee.
5. **Attendance and Payroll Update:**
   - The system updates the employee's **attendance record** to reflect the departure date.
   - The system calculates the employee's **final payroll** (e.g., any outstanding payments, unused leave, severance pay) and updates the payroll records accordingly.
6. **Clearance and Dues Settlement:**
   - The system checks if the employee has any outstanding **dues** (e.g., advances, room payments, or equipment return).
   - The HR/Hostel Manager settles any dues or flags them for follow-up.
   - If necessary, the system calculates any applicable severance or benefits.
7. **Data Archiving:**
   - The system **archives** the employee's data, including room assignments, attendance, and payroll history, for compliance and reporting purposes.
8. **Notification Sent:**
   - The system sends an **automated notification** to the employee, HR, and the hostel management team confirming the departure and that the necessary records have been updated.
9. **Reports Generated:**
   - The system generates a **report** of all leaved employees, with details on their **departure dates**, **room vacancies**, **pending payments**, and **clearances**.

Alternative Flows (Extensions):

1. **Pending Dues or Unpaid Fees:**
   - o **Step 6A:** If the employee has any unpaid dues (e.g., accommodation fees, unpaid leave), the system prevents the status update until the dues are settled.
   - o **Step 6B:** The HR/Hostel Manager is prompted to either settle the dues or flag them for future resolution.
2. **Room Inspection Pending:**
   - o **Step 4A:** If the room inspection or item return is pending (e.g., employee has not returned keys or other items), the system notifies the HR/Hostel Manager to complete the inspection.
   - o **Step 4B:** The system may prompt the HR/Hostel Manager to initiate the room inspection manually.
3. **Employee on Temporary Leave:**
   - o **Step 3A:** If the employee is temporarily leaving (e.g., extended vacation or temporary assignment), the HR/Hostel Manager can mark the status as **Temporary Leave** instead of "Leaved."
   - o **Step 3B:** The system retains the room allocation and attendance records for when the employee returns.

Exception Flows:

1. **System Error During Update:**
   - o If there's an error while updating the employee's status, the process is halted, and the system displays an **error message**.
   - o The system logs the error, and the HR/Hostel Manager can attempt the update again after troubleshooting.
2. **Employee Record Not Found:**
   - o If the employee's record cannot be located (e.g., due to system issues), the system prompts the HR/Hostel Manager to verify the employee's details and attempt the update again.
3. **Incomplete Exit Formalities:**
   - o If exit formalities (such as return of room keys or company equipment) are incomplete, the system alerts the HR/Hostel Manager, and the status update cannot be completed until these tasks are resolved.
4. **User Permissions Error:**
   - o If someone without the appropriate permissions (e.g., unauthorized staff) tries to mark an employee as "Leaved," the system denies access and shows an **"Access Denied"** message.

Trigger:

- The **trigger** for this use case occurs when an employee notifies the HR or Hostel Manager of their departure (e.g., resignation, contract completion, etc.), and formal approval or acknowledgment is received to proceed with updating their status.

Special Requirements:

- **Data Security & Privacy:** Employee data must be handled with confidentiality, ensuring that only authorized personnel can access or modify the records.
- **Exit Formalities:** The system should support exit formalities like returning company property, keys, and other hostel-related equipment.
- **Notifications:** Automatic notifications should be sent to the employee, HR, and hostel management team upon the successful processing of the employee's departure.
- **Reports:** A report on leaved employees should be generated for auditing and record-keeping, including details on dues, room vacancies, and payroll settlements.
- **System Availability:** The system must be available for HR and Hostel Managers to complete employee exit formalities at any time.

SSD for leaved Employee:

Hostel Warden	Hostel Management System	HR System	Admin	Maintenance Staff

Notify Departure of Employee →

Validate Employee Status and Leave Request

Update Employee Status to "Leaved"

Update Room Status to "Vacant"

Update Attendance Record

Check for Pending Dues or Payments →

← Return Pending Dues Info

Notify Admin about Employee Departure →

← Notify Warden about Employee Departure

← Notify Employee about Leave Status

Archive Employee Data for Record-Keeping

Request Room Inspection if Needed →

← Confirm Room Inspection Completion