Alliance Hotel Management

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overview/purpose

AHM- Introduction: Management has hired us, SunRay Management, to create a hotel management system that will efficiently handle booking rooms. The application will also serve as a platform for consumers to order room service. The application will be called Basic Alliance System. The BAS software will bridge the gap between room service, hotel booking, management and the consumer in order to improve the check-in process as well as room service

AHM- Guest Privileges: Once the guest check-in their room, they will automatically be provided with a user ID (last name) and password (room number) that allows them to request room service and access Wi-Fi information. The tablet will allow them to request room service or order food/drinks. Which will be delivered by the housekeeping or an employee.

- ❖ Request Meal:
  - ❖ Breakfast
  - ❖ Lunch
  - ❖ Appetizers
  - ❖ Dinner
  - ❖ Drinks
- ❖ Request Service:
  - ❖ Towels
  - ❖ Extra pillows or sheets
  - ❖ Cleaning

AHM- Employee Capabilities: Every employee shall log into the AHM module to clock in as soon as they arrive into work .This means that once they are finished with their shift, they shall clock out and log out of the module to assure their time has been recorded.

❖ **Login/Logoff:** All users (managers, desk attendants, housekeepers, and guests) shall have a separate login that will give each user different capabilities within the hotel.

❖ **Desk Attendant:** Each desk attendant employee shall have access to view, book, modify and delete reservations. The desk attendants will handle all transactions. Attendants shall also be able to view room service requests so that they can contact and notify the housekeeper of any pending requests that may happen to go unnoticed.

❖ **Housekeeper:** Each desk attendant employee shall have access to view, book, modify and delete reservations. The desk attendants will handle all transactions. Attendants shall also be able to view room service requests so that they can contact and notify the housekeeper of any pending requests that may happen to go unnoticed.

❖ **Managers/Supervisor:** All managers shall have the access to view all databases that are incorporated into the software, which means that they have the access to view everything to manage the entire hotel

Metrics

- Lines of code: 3500
- Report: 42 Pages but not the final deliverable.

Function Point Cost Analysis

FUNCTION - ORIENTED METRICS

Function points [Albrecht 1979] are basic data from which productivity metrics could be computed. FP data is used in two ways:

- as an estimation variable that is used to "size" each element of the software,
- as baseline metrics collected from past projects and used in conjunction with estimation variables to develop cost and effort projections.

Weighting Factor

Measurement Parameter	Count	Simple	Average	Complex	=
Number of User Inputs	35 x	○3	◉4	○6	140
Number of User Outputs	6 x	○4	◉5	○7	30
Number of User Inquiries	18 x	○3	◉4	○6	72
Number of Files	10 x	○7	◉10	○15	100
Number of External Interfaces	15 x	○5	◉7	○10	105

Count = Total --
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Note. By clicking on the buttons above more information about the measurement parameters will be

F1. Does the system require reliable backup and recovery? `4`

F2. Are data communications required? `5`

F3. Are there distributed processing functions? `0`

F4. Is performance critical? `4`

F5. Will the system run in a existing, heavily utilized operational environment? `4`

F6. Does the system require on-line data entry? `2`

F7. Does the on-line data entry require the input transaction to be built over multiple screens or operations? `3`

F8. Are the master files updated on-line? `2`

F9. Are the inputs, outputs, files or inquiries complex? `2`

F10. Is the internal processing complex? `5`

F11. Is the code designed to be reusable? `4`

F12. Are conversion and installation included in the design? `0`

F13. Is the system designed for multiple installations in different organizations? `4`

F14. Is the application designed to facilitate change and ease of use by the user? `3`

[Calculate] [Reset]

Result. According to the input your project has: **478 FP**

Database Used:

- **SQLite**
- One database will be created to maintain four separate tables used for the Alliance Hotel System.
  - Employee/User login
  - Hotel Rooms
  - Room Service Requests,
  - Customer Information.
- **Java Swing API**
- A graphical user interface will be created in order for the user to interact with the database.
- Manager will have the privilege to access and manipulate a

Software Architecture:

- For the Basic Alliance System, our software will be an implementation of the Client-Server model as depicted below.
- The software application will be installed into the computers and tablets that have been placed throughout the hotel.
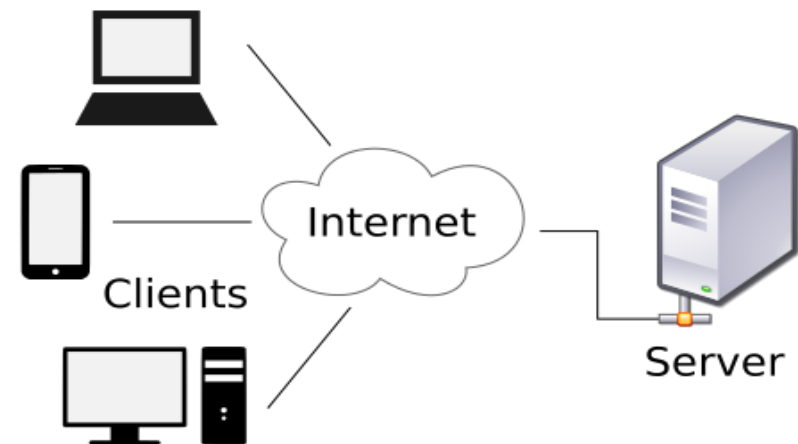
System Model

- **System Requirements:** PC or MAC
- **Software Requirements:** Java
- **Analysis:** Hotel Management System
- **Program Design:** GUI Application
- **Coding:** Java Swing API & SQLite
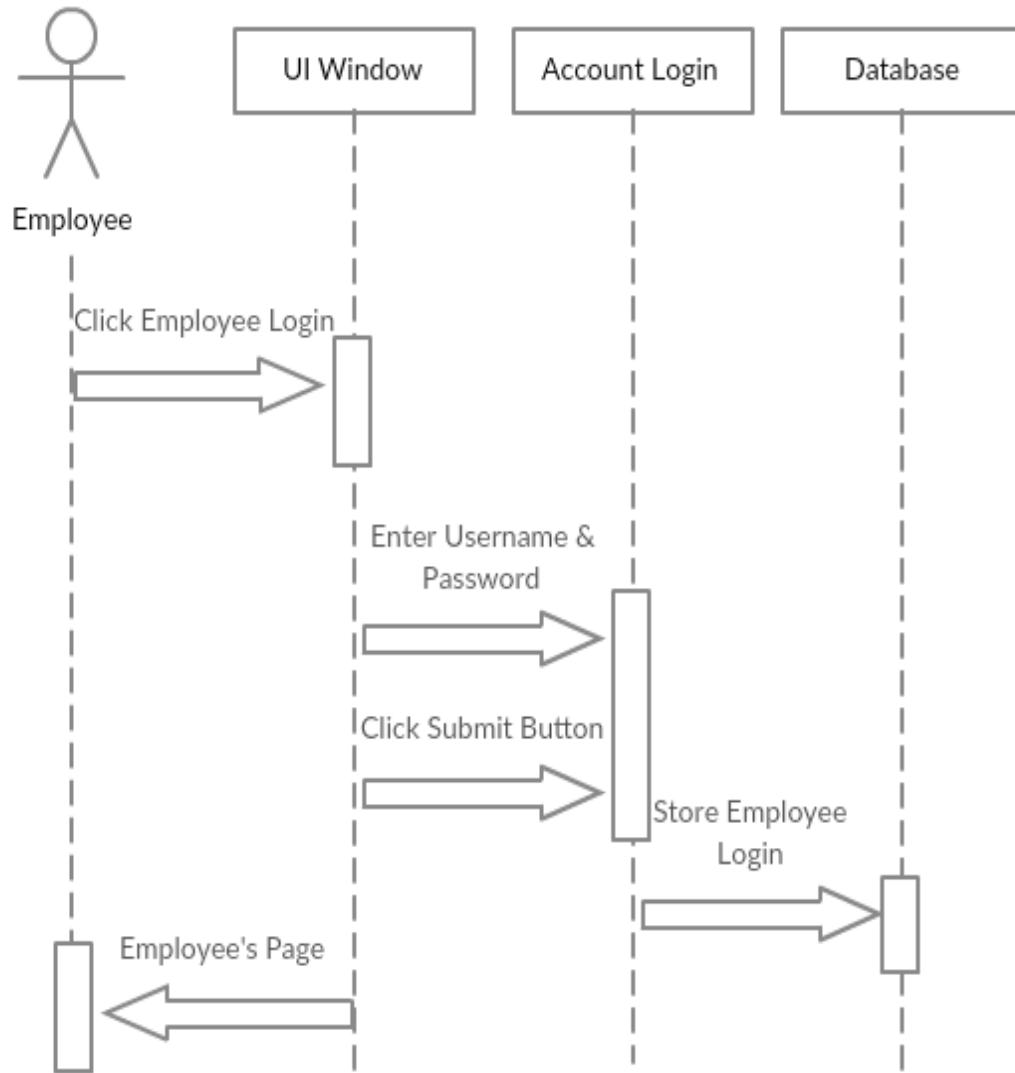- **Testing:** Functional testing

UML Use Cases &

Sequence Diagram

Use Case 1:	EmployeeLogin
Participating Actors	Employee
Flow of Events	1. Employee selects Employee Login from home view. 2. Employee enters username and password into the prompted fields, or may select Cancel. If Cancel is selected, user is redirected to home view. 3. Employee clicks login button 4. After the Employee's logins, their username and password will store in the database. 5. Page loads and displays the Employee view
Entry Condition	System must be at home view while no other users are logged in to the system.
Exit Condition	All values submitted are of correct type or user has selected Cancel.
Special Requirements	After submitting their credentials, values entered in the prompted fields must correspond to an active employee of type Admin in the database.

The Employee must make sure they enter the correct Username and Password, for them to view their screen.
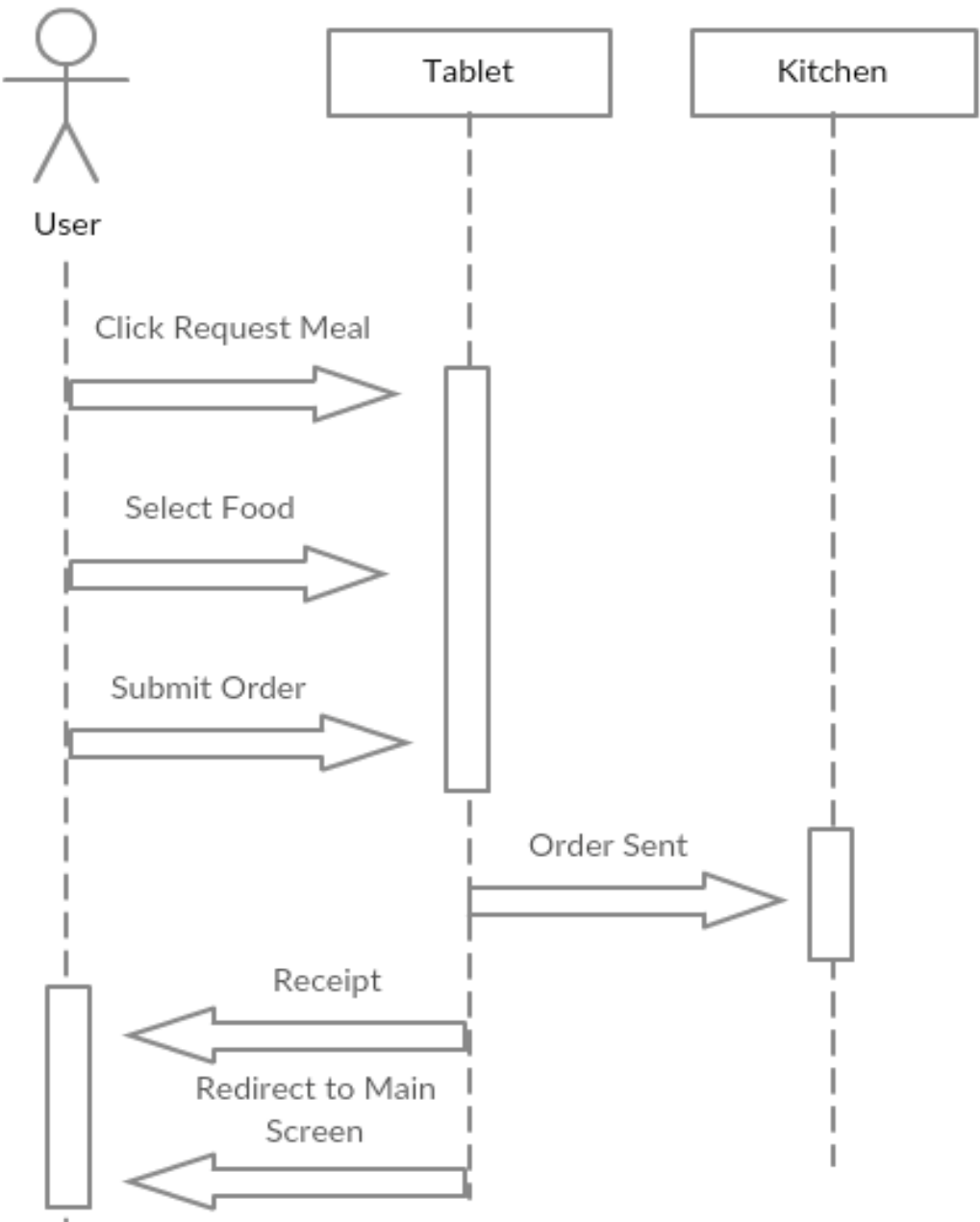
employeeLogin

Use Case 2:	GuestRequestMeal
Participating Actors	Guest
Flow of Events	1. On the Guest main page, Guest will select the 'Request Meal' tab. 2. Guest can specify what they would like to order from the given menu. 3. Guest can press submit to complete the process be sent back to the Guest main page. 4. Guest can press submit to stop the process and be sent back to the Guest main page. 5. Once the Guest sends the order, they will receive a receipt with their meal display on the screen.
Entry Condition	On the Guest main page, guest will go to the 'Request Meal' screen.
Exit Condition	Guest can click 'submit' or click 'cancel' to be sent back to the Guest main page.
Special Requirements	The Kitchen supervisor will be able to monitor the orders placed and make sure they are delivered within the quoted time.

The guest must make sure they choose the food according to what they desire and submit order so they are taken back to the main tab in case they want to add anything else they missed.

guestRequestMeal

Use Case/Sequence Diagram

Use Case 3:   **GuestRequestServices**

Participating Actors   Guest
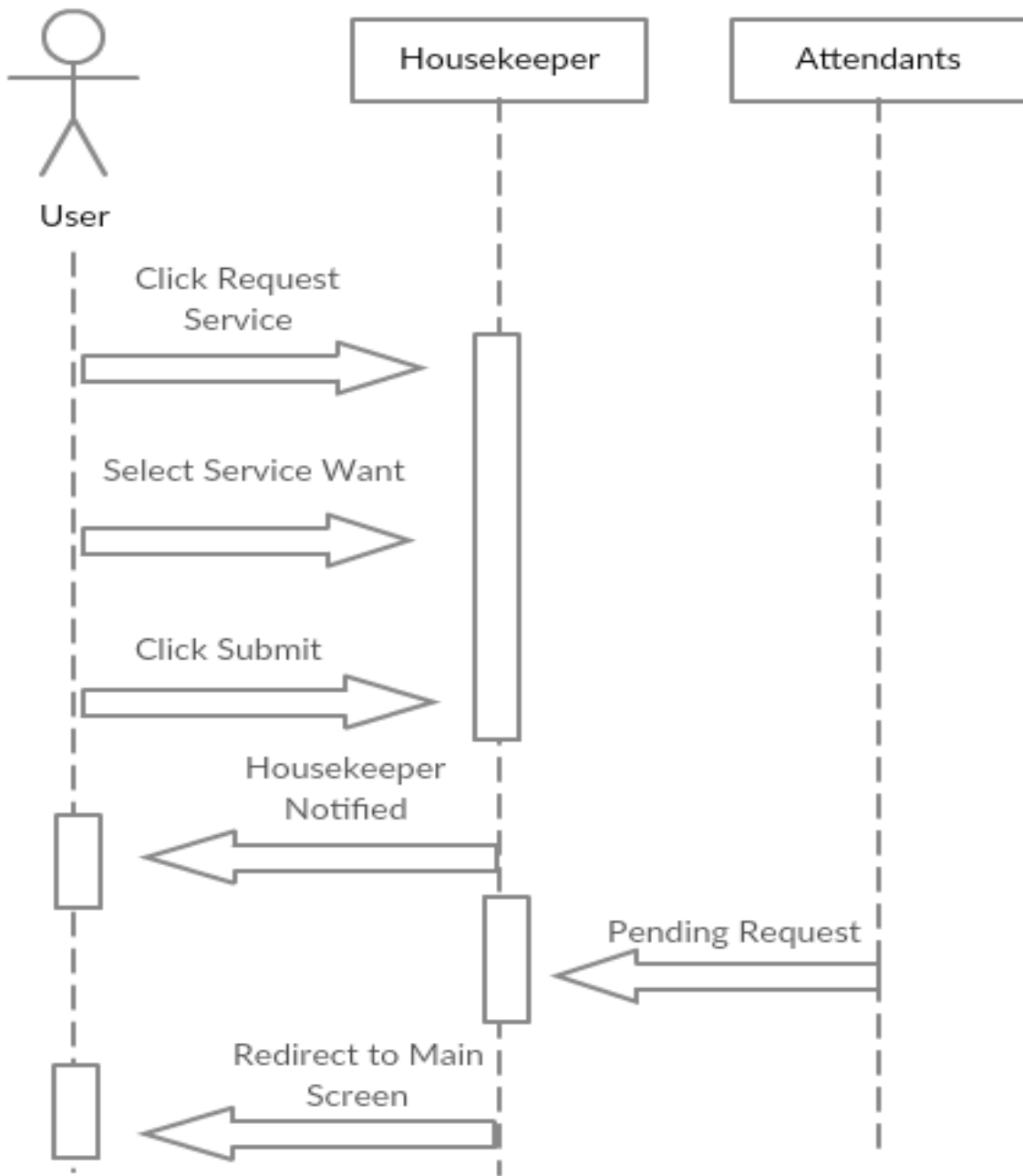
Flow of Events
1. On the Guest main page, Guest will select from the Needs List.
2. Guest can specify what services they need from the hotel.
3. Guest can press submit to complete the process and be sent back to the Guest main page
4. Guest can press cancel to stop the process and be sent back to the Guest main page
5. Once the Guest submits the services they want the housekeeper will be notified.

Entry Condition   On the Guest main page, guest will go to the 'Request Service' Screen.

Exit Condition   Guest can click 'submit' or click 'cancel' to be sent back to the Guest main page.

Special Requirements   The Attendants will coordinate with housekeeping and make sure everything the guest requested is received and then making sure the guest's are satisfied.

The guest should make sure they have everything they asked for and mention if they need any more services.

Use Case/Sequence Diagram

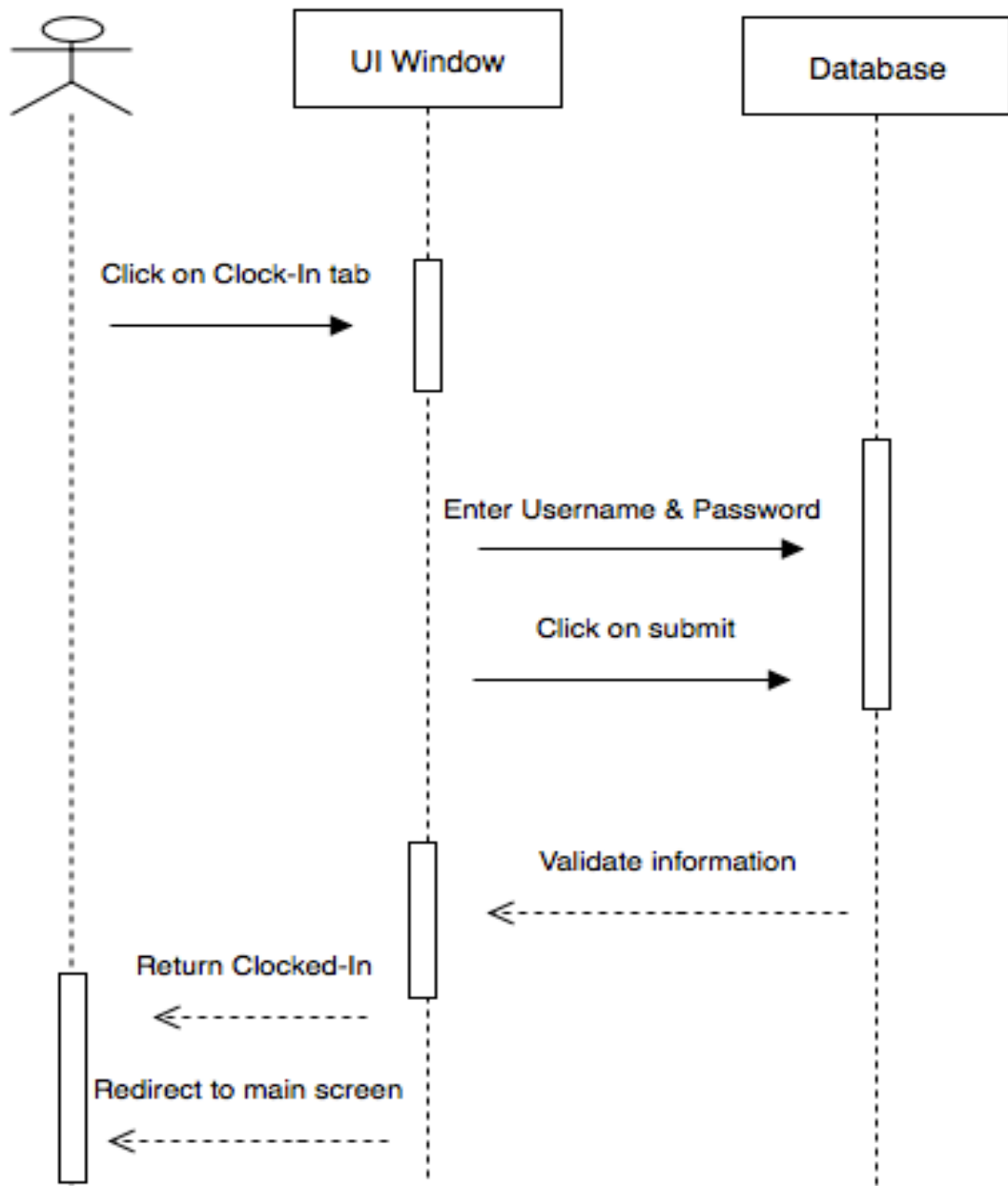|	
Use Case 4:	**Login/Clock-in**
Participating Actors	Employee and Manger
Flow of Events	1. On the Employee main view, Employee will select the button according to their particular position. 2. They will then be prompted to type in their username and password. 3. Employee can press submit to validate their information. 3.1 An alert box will appear saying "Log in Sucessful". 3.2 The Employee will press 'Okay' and be sent back the Employee main view.
Entry Condition	Clock-In/Clock-Out Tab on the Employee main view.
Exit Condition	Employee can click 'submit'. If the number is correct, then Employee will press 'Ok' to be sent back to the Guest main page.
Special Requirements	The manager will make sure that the employees work according to their schedule and they don't work overtime.

Employees must check in as soon as they come in to prevent future conflicts, which arise when employees don't sign in causing errors in their salary.

clock-In

login/Clock-In

Use Case/Sequence Diagram

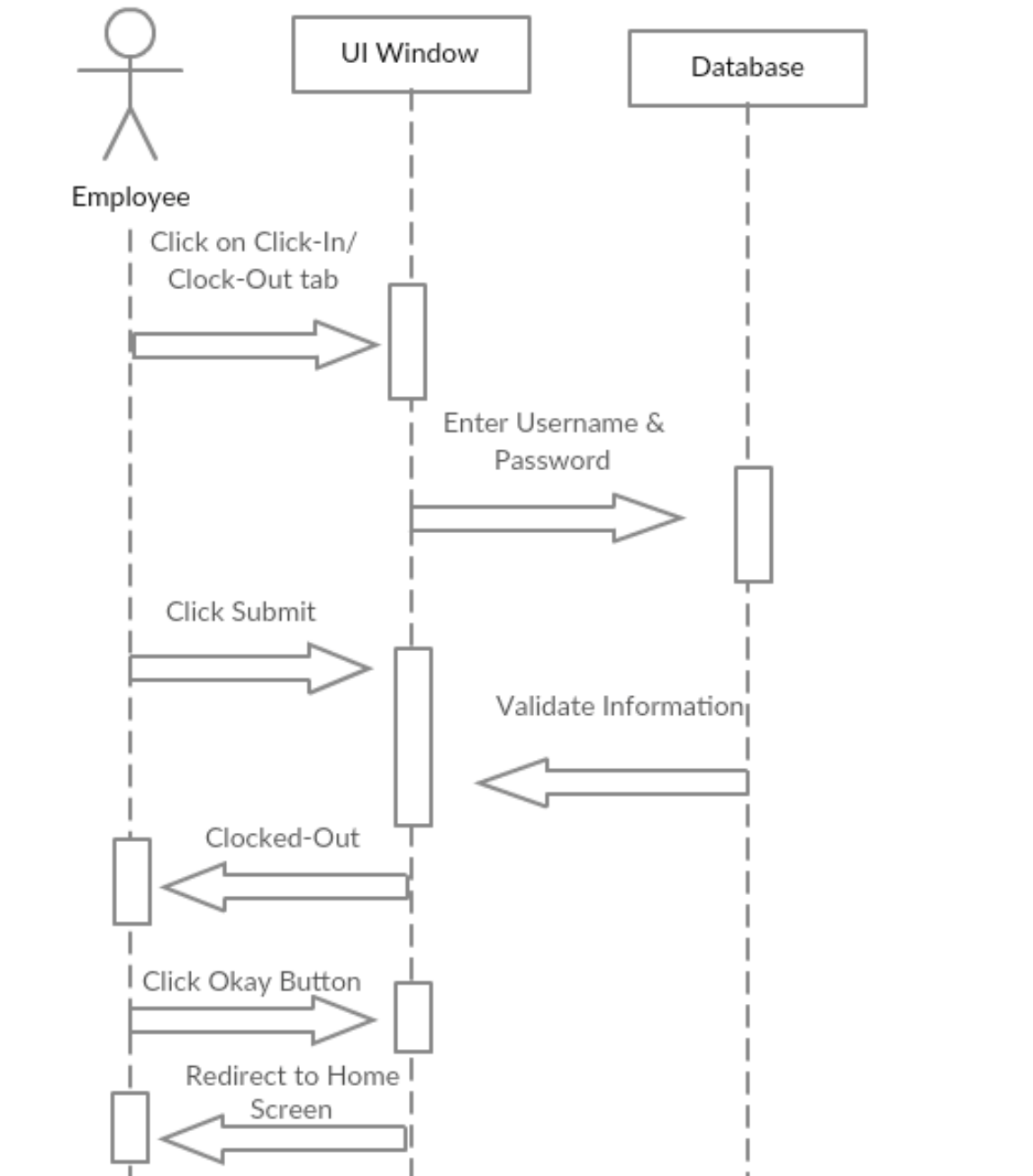|	
Use Case 5:	**Logout/Clock-out**
Participating Actors	Employee and Manger
Flow of Events	1. On the Employee main view, Employee will click the Log out button. 2. Type in their username and password. 3. Employee can press submit to validate their information. 3.1 An alert box will appear saying, "Log out Successful". 3.2 The Employee will press 'Okay' and be sent back to the Employee main view.
Entry Condition	Clock-In/Clock-Out Tab on the Employee main view
Exit Condition	Employee can click 'submit'. If the number is correct, then Employee will press 'Ok' to be sent back to the Guest main page.
Special Requirements	Managers make sure that each employee is given their check according to the hours they worked during the month.

Employees must make sure they are done with all their duties before they check out. They should also check their schedule for the following day.

login/Clock-Out

Use Case 6:	EmployeeView
Participating Actors	Employee
Flow of Events	1. On the Employee main view, Employee will go to the "New Guest" tab. 2. The Employee will type in the guest information as in name, address, and payment type. 3. The Guest can tell the desk attendants which room they prefer to have. 4. The payment will then be process. 5. Employee can click 'submit' which will print/display a receipt for the guest.
Entry Condition	Employee will go to the "New Guest" tab.
Exit Condition	Employee can click 'submit' which will print a receipt for the guest.
Special Requirements	The desk attendants will handle all transactions.

The Employee has access to view, book, modify and delete reservations.

employeeView
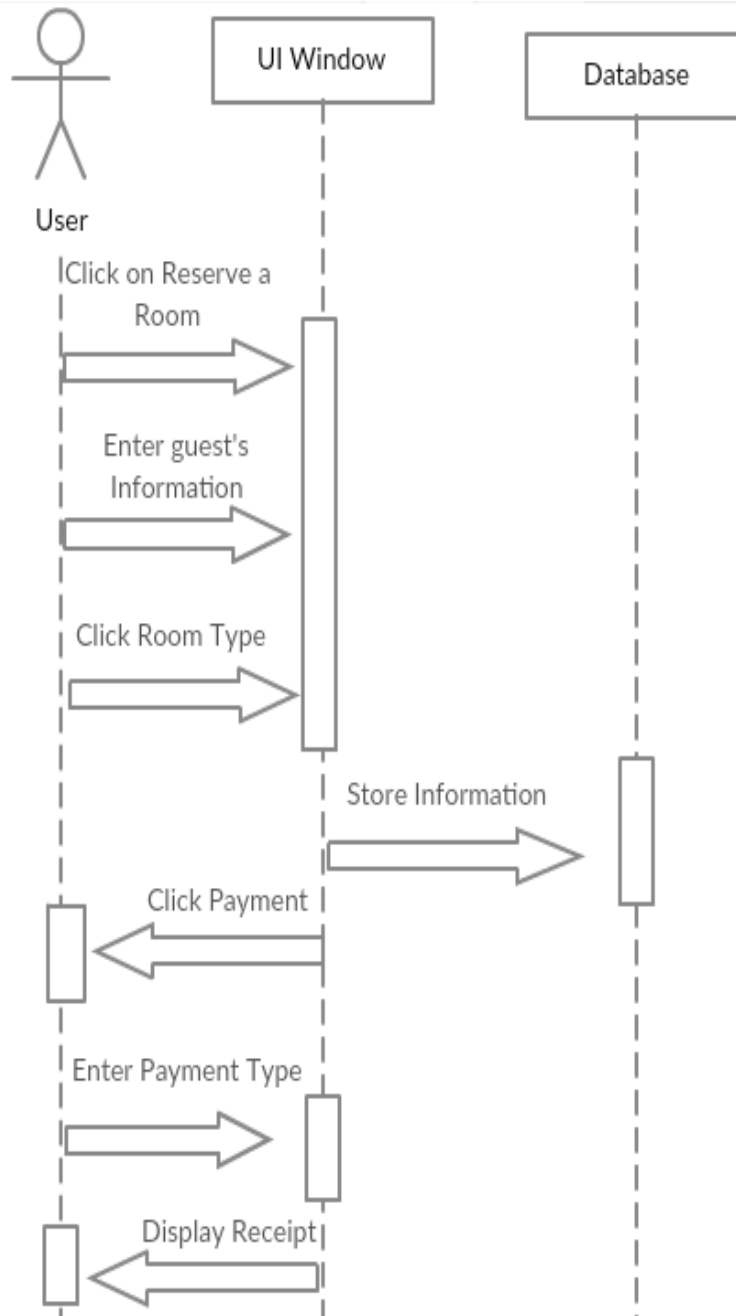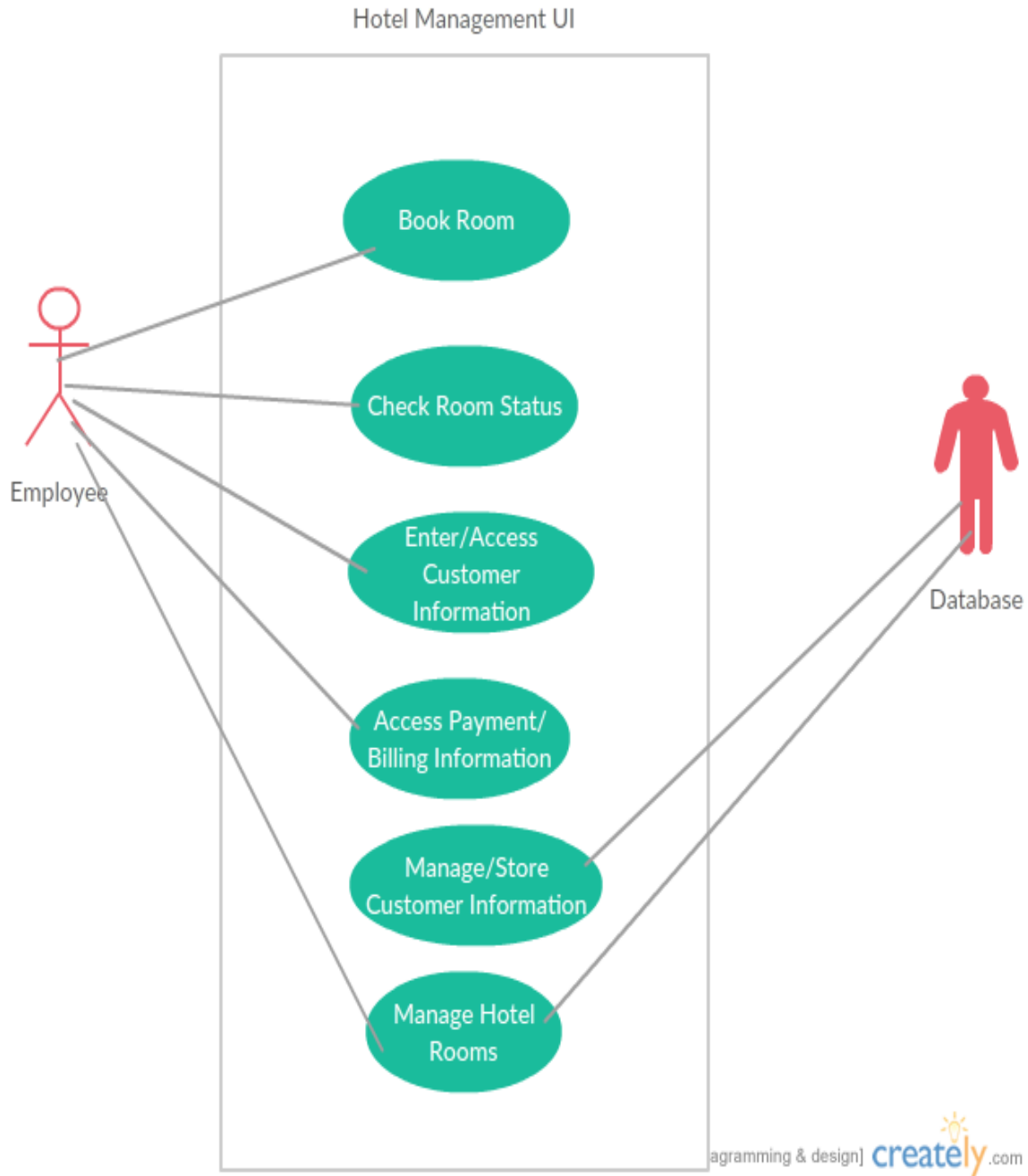
Demonstrate the software

Summary