

CSF213 Project
Report

InnLogix
Hotel Management System

Submitted by

ID No	Name
2016AAPS0216H	Somya Sharma
2016A3PS0255H	Gaurab Das Gupta
2016A3PS0272H	Utsav Kaushik



Birla Institute of Technology and Science Pilani
HYDERABAD CAMPUS

Second Semester 2017-18

Contents

1	Introduction	4
1.1	Purpose of the SRS	4
1.2	Abstract	4
1.3	Why use InnLogix?	4
1.4	Overview	4
2	Overall Description	5
2.1	Product Functions	5
2.2	User Characteristics	5
2.3	Product Perspective	5
2.4	Constraints	7
2.5	Assumption and Dependencies	7
3	Specific Requirements	8
3.1	Software Interfaces	8
3.2	Hardware Interfaces	8
4	Functional Requiements-System Features	9
4.1	Login	9
4.2	Administration Dashboard	9
4.2.1	Admin Section	9
4.2.2	Front Office	9
4.2.3	Housekeeping	11
4.2.4	Kitchen/Restaurant	11
4.2.5	Spa/Gym	11
4.2.6	Bookings	11
4.2.7	Banquet Hall	12
4.2.8	Inventory Management	12
4.2.9	Accounts Panel	12
4.3	Guest Dashboard	12
4.3.1	Requests	12
4.3.2	Housekeeping	13
4.3.3	Room Service	13
4.3.4	Complaints	14
4.3.5	Billings	14
4.3.6	Services	14
4.3.7	WiFi Usage	14

5	Nonfunctional Requirements	17
5.1	Performance Requirements	17
5.2	Security Requirements	17
5.3	Safety Requirements	17
5.4	Capacity Requirements	17

1 Introduction

1.1 Purpose of the SRS

This Hotel Management System Software Requirement Specification's (SRS) main objective is to provide a base for the foundation of the project. It gives a comprehensive view of how the system is supposed to work and what is to be expected by the end users. Client's expectation and requirements are analyzed to produce specific unambiguous functional and non-functional requirements, so they can be used by us with clear understanding to build a system as per end user needs.

1.2 Abstract

"Hotel Management System" is a project which is developed to provide an easy and simple way for guests to communicate with the hotel administration and for the administration to manage front office capabilities such as booking reservations, guest check-in/check-out, room assignment, managing room rates, and billing to name a few. We aim to deliver a software platform that will replace time-intensive, paper and spreadsheet-heavy processes. It will also integrate other onsite services that impact the guest's complete experience, such as food and beverage operations, housekeeping and maintenance management, sales and catering, spa management.

1.3 Why use InnLogix?

Simplify reservations, improve operating efficiency and maximize revenue. Reduce dependency on manpower. Manual errors become a thing of the past as critical operations get automated and managed in real-time. The staff work in sync with all departments. Assign room cleaning tasks to housekeeping and track it in real-time from the frontdesk or housekeeping console. Overall it is an innovative and easy to use front desk interface that acts as a single-point dashboard to control all your operations. You can customize it to suit your hotel's needs and manage multiple tasks at all times

1.4 Overview

The remaining sections of this documentations describes the overall descriptions which includes product perspective and functions, characteristics of users. It also consists of assumptions and constraints.

2 Overall Description

2.1 Product Functions

General functions:

- Customer Registration
- Check for Availability Of Rooms
- Payment
- Customer Service
- Display the Rate
- Confirmation Of Booking
- Set Room Details
- Manage Booking Details
- Generate Report
- Email Notification

2.2 User Characteristics

There are 2 user levels in our HMS:

1. **Administration** is responsible for managing hotel resources and staffs. Managers can view any information such as financial report, customer information, booking information, and room information, analyze them and take the decision accordingly.
2. **Guest/Customers** can send requests for various services like housekeeping, lodge complaints, view their transactions.

2.3 Product Perspective

Here's an hierarchical overview of the system:

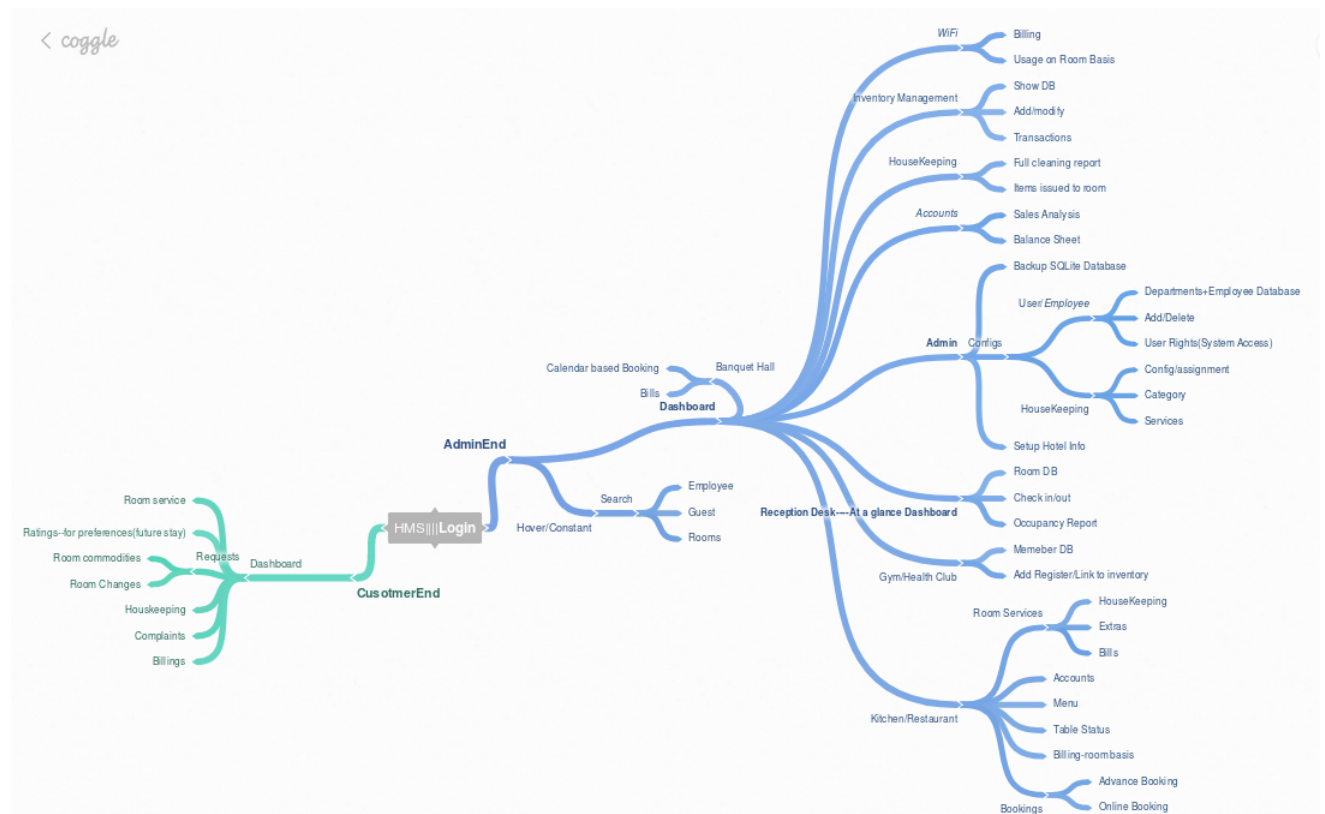


Figure 2.1: MindMap: Click [here](#) for a better view

2.4 Constraints

Language : The system offers English only.

2.5 Assumption and Dependencies

It is assumed that system developed will work perfectly with any OS with Java SE Development Kit installed. The program will be developed with java version "1.8.0_151", Java(TM) SE Runtime Environment (build 1.8.0_151-b12).

The Admin side will run on desktops. The Guest side will be a java applet accessed via intranet. But for ***demo purposes*** we will showcase it as a offline jar executable file on a system.

3 Specific Requirements

3.1 Software Interfaces

Programming Language: Java

Libraries and Frameworks:

- JavaFX
- JFoenix
- FontAwesomeFX
- SQLite

3.2 Hardware Interfaces

Pretty basic hardware is needed to run the program.

User Side:

- Processor: AMD/Intel 1GHz
- RAM: 512 MB
- Disk Space: 2GB

4 Functional Requiements-System Features

4.1 Login

- Register an employee
- Sign in for both guests and administration
- “Remember me” option, so that an user need not login again and again

4.2 Administration Dashboard

4.2.1 Admin Section

The Admin module provides admin privileges to the head manager of your hotel to keep all the activities encapsulated from other sections, manage every modules and set access rights.

- Employee Database
 - Create users, store and sort department wise
 - Set restrictions on each employee’s system access(eg. Restaurant manager can only access the kitchen section)
 - Create SuperAdmin(has privilege to access every module)
- Setup Hotel information
 - Link with email/OTA
 - Types of rooms with tariff
- Front Desk Configuration
 - Set various settings(eg, Check-in/out time late checkout charges)
- Backup Database

4.2.2 Front Office

The Front Office module provides staff and management with an efficient tool to easily manage all front office operations within a centralized environment. Combining full guest service management with complete group billing and handling, InnLogix’s Front Office module offers seamless integration with its other modules.

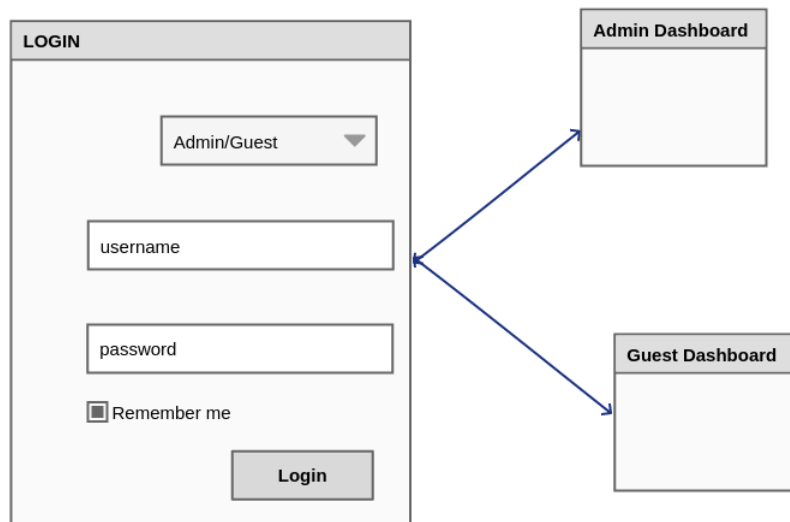


Figure 4.1: Login Module Data Flow

- Room DataBase
 - View/modify the details of the rooms available
 - Add new rooms under various categories
- Guest check-in
 - Registration form with payment options
 - Upload identity proof pdf
 - Search existing guest database with name/mobile number
- Guest check-out
 - Get total bill of charges(meals, spa etc.) incurred during the whole stay on one-click
 - Print the receipt
- Main Dashboard
 - At a glance color coded view of all the rooms' status
 - Click on a “card” to see all the corresponding details(guest's details, maintenance status etc)
 - Access services from the card. This will be the admin side view of all the requests/complaints(room change) the guest has made through the customer end through this application.
 - Get occupancy report

4.2.3 Housekeeping

The Housekeeping module of InnLogix enables the user to enter and track information that is required to manage the hotel's housekeeping, with instant updating of room status.

- Get cleaning report of all the rooms given by floor superintendent with log, timestamp etc.
- Keep a check on items issued to room

4.2.4 Kitchen/Restaurant

The Restaurant module is a one stop solution for managing your restaurant with table reservations, ordering, accounts all in one place.

- Managing food menu and keep a check on availability of items
- Guests can login to this portal and place their order for room service
- Generating a bill for all the deliveries to a particular guest user
- Table Occupancy Status

4.2.5 Spa/Gym

Manage the facilities provided by the hotel.

- Getting the membership for the Gym or Spa
- Keep a check of available timings

4.2.6 Bookings

Manage the booking aspects of your hotel.

- Keeping the record of already booked rooms-available for online hotel booking websites
- Online Booking
 - Advance Booking Discount
 - Seasonal Room Tariff
 - Booking date blocking
 - Default Bank Account

4.2.7 Banquet Hall

Manage your banquet hall's bookings and maintenance.

- Manage bookings based on availability through a calendar based system
- Get reports on transactions , stock etc.

4.2.8 Inventory Management

Keep track of all your inventories and analyse your deals.

- Get list of purchased items centre wise like “Kitchen Stock” etc.
- Modify the item list
- Keep track of the transactions made with suppliers

4.2.9 Accounts Panel

All your accounts in one place supplying you with all the analytics.

- Complete Management of Accounting :
 - Profit and Loss
 - Balance Sheet
 - Account Statement
 - Daily Statistics Report

4.3 Guest Dashboard

InnLogix's Guest Interface module provides the features you need to support the needs of your members. From member billing and statements to expense tracking, this module will help you gain control of your member accounting.

4.3.1 Requests

The guest can forward their requests to the administration through this module.

- Various commodities
- Room change
- Extra bed

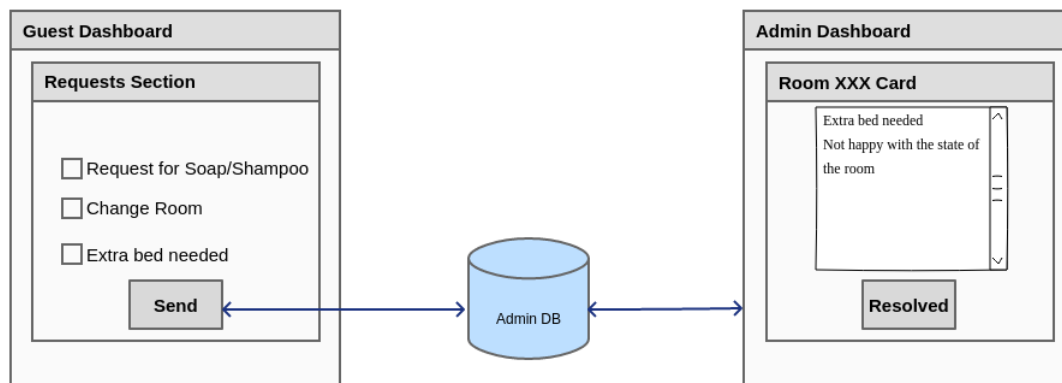


Figure 4.2: Requests Module Data Flow

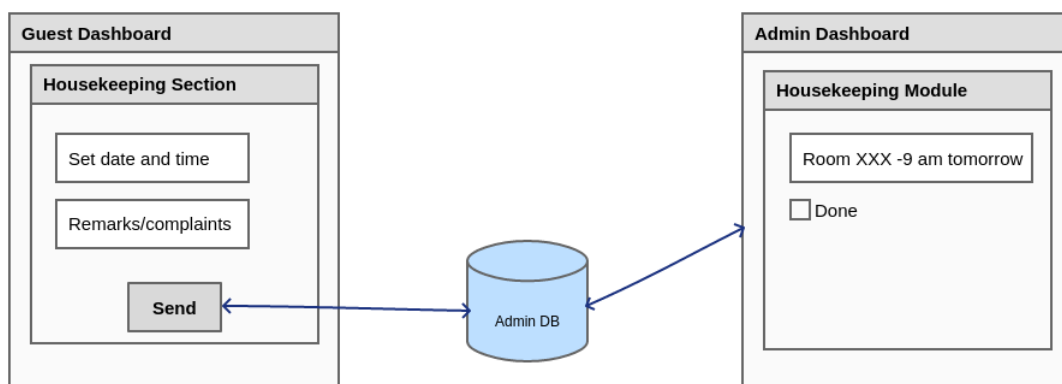


Figure 4.3: Housekeeping Module Data Flow

4.3.2 Housekeeping

The guest can avail housekeeping services and specify their needs through this.

- Guest can set the timings when the room will be free
- Complaints

4.3.3 Room Service

Guests can avail room service from anywhere-for example they can pre-order meals even if they are not present in the hotel.

- Request for room service for various reasons, all linked to the admin side

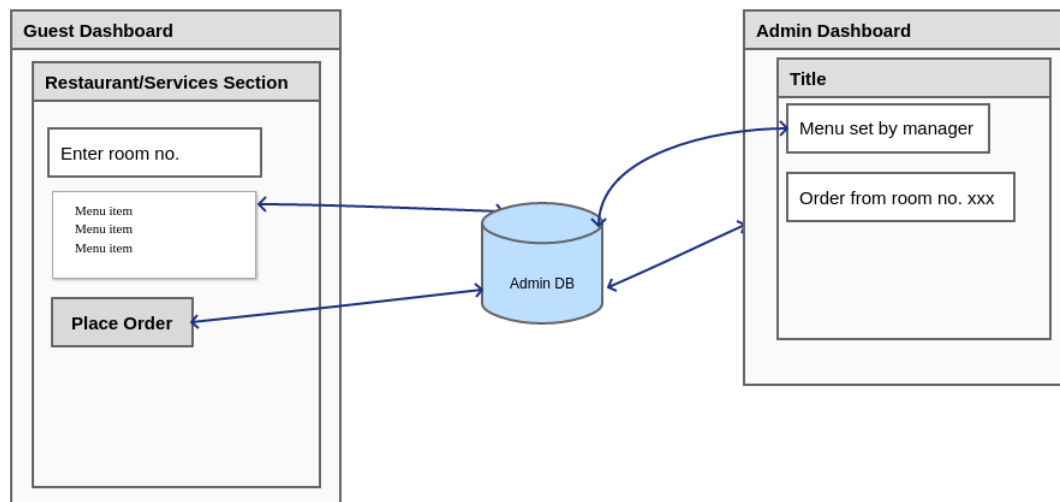


Figure 4.4: Services/Restaurant Module Data Flow

4.3.4 Complaints

All the lodged complaints through this module will be sent to the administration.

- Guests can lodge complaints to various departments
- They can also give ratings and preferences such that you know them well and offer a more pleasant stay the next time they visit

4.3.5 Billings

All of the guest's transaction, in one place.

- Send all the transactions(gym/spa/restaurant/laundry) that take place daily

4.3.6 Services

Miscellaneous Services can be availed through this.

- Placing the time slot for your gym/spa session
- Placing order from outside
- Reservation table

4.3.7 WiFi Usage

- It will show the guest how much data he/she has used
- Option to pay for extra data

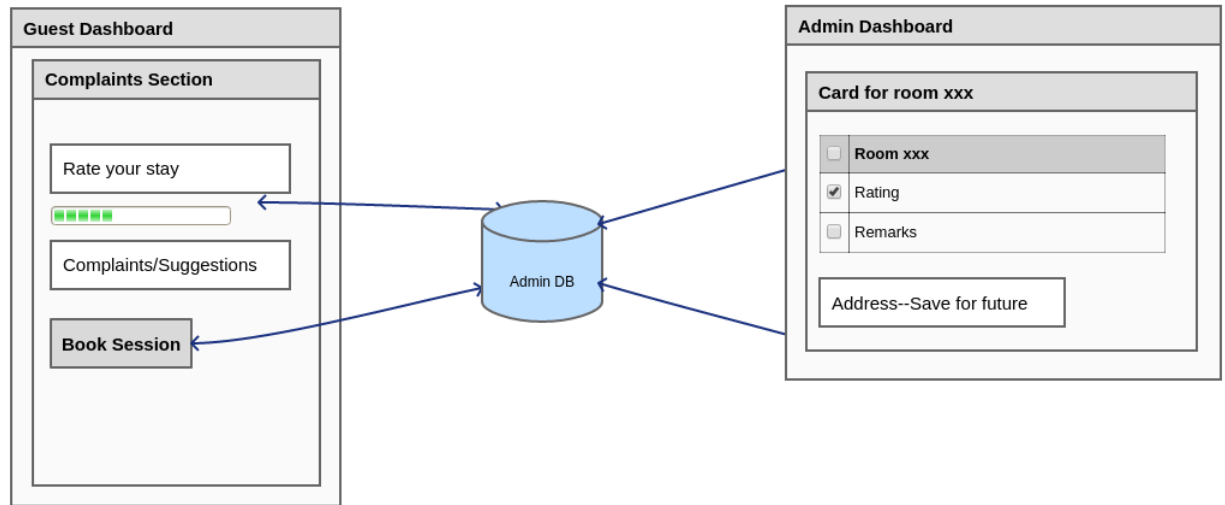


Figure 4.5: Complaints/Ratings Module Data Flow

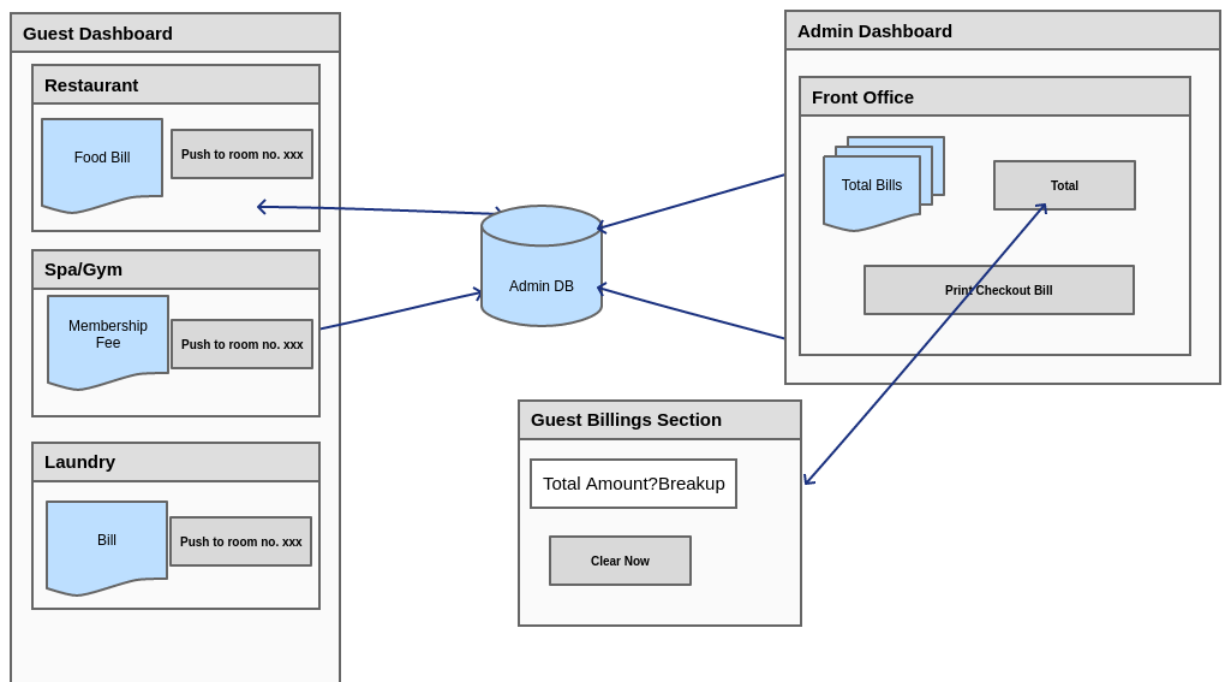


Figure 4.6: Billings Module Data Flow

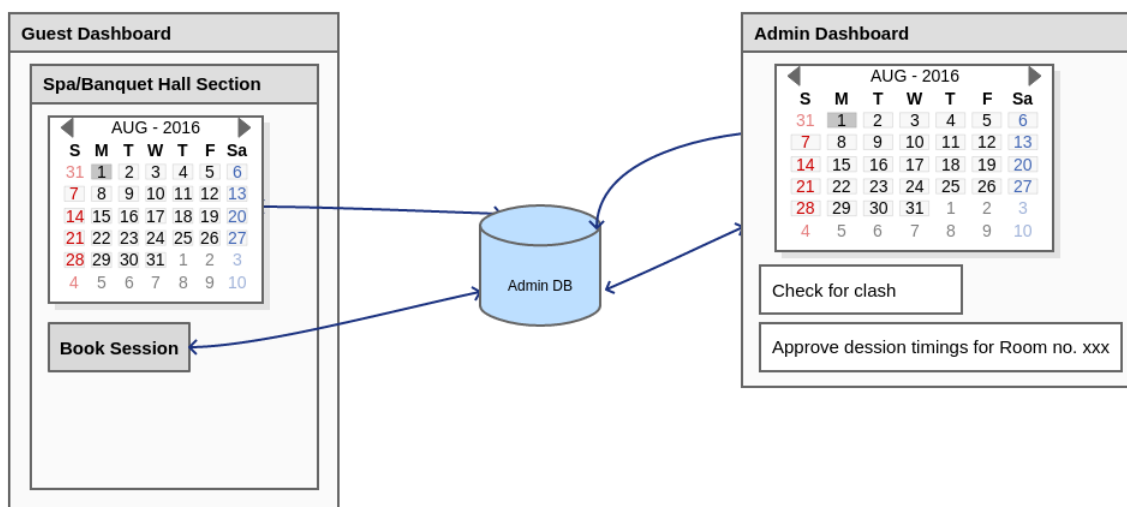


Figure 4.7: Services Module Data Flow

5 Nonfunctional Requirements

5.1 Performance Requirements

Performance should not be an issue because all of our queries involve small pieces of data. Changing screens will require very little computation and thus will occur very quickly. These functions will be optimized to make it highly efficient:

- Data update in database
- Queries returning results
- Load time of UI
- Login Validation
- Response to customer inquiry
- Report should be generated automatically every day for manager and anytime upon request

5.2 Security Requirements

All data must be stored, protected or protectively marked.

5.3 Safety Requirements

- Database should be backed up every hour
- Under failure, system should be able to come back at normal operation under an hour

5.4 Capacity Requirements

- Not more than 20,000 members to be registered
- System need to handle at least 30 transactions during peak hours