Software Requirements Specification

ID	Type	Description	Priority	Status
SRS-1	Information	1 Introduction This SRS document specifies the functions of Hotel Automation System (HAS). It envelopes the requirements and expectations that the software needs to serve for hotel staff and manager, such as, booking rooms for customers, calculating expenses, generating bills, customer services, etc.		
SRS-2	Information	1.1 Purpose The purpose of the HAS system is to help provide facilities to the hotel management, so that activities for changing room tariff, booking rooms, billing, expenses, etc. are maintained and kept track of, conveniently.		Ready
SRS-3	Information	1.2 Scope • The software is to be used by the hotel staff and the manager, with an appropriate user role / user access. • The software should allow access to users with relevant roles, for updating desired changes. • It should be scalable enough to accommodate information for the customers of the entire hotel.		Ready
SRS-4	Information	1.3 Product perspective The product aims at achieving functions such as calculating occupancy rate, booking rooms for customers, calculating expenses and billing them, secure transactions, fast retrieval of information or any kind of relevant data. The functions performed are a part of the entire software project. The idea is to make these processes compatible with the computer using interfaces.		Ready
SRS-5	Interface Requirement	1.3.1 System interfaces The software should be highly user friendly, so that entering data and getting extracted or retrieval of data from it could be done easily. The GUI design should be well-oriented and structured to incorporate and dictate changes, as and when required.	Medium	Approved
SRS-6	Interface Requirement	1.3.2 User interfaces • The home-page of the application software • Access to software functions/actions using command line interface (CLI) or Graphical User Interface(GUI) • Login page and profile page for the user (user as in the hotel management)	High	Approved
SRS-7	Interface Requirement	1.3.3 Hardware interfaces The system GUI gets linked to the desktop screen and should be compatible with each other. For this purpose, graphics should be supported and so built-in graphics of the CPU, or dedicated graphic card or GPU, should also be present in the system. Moreover other hardware interfaces might include ATA / IDE, Ethernet, SCSI, NIC (Network Interface Card)	Medium	Approved
SRS-8	Interface Requirement	1.3.4 Software interfaces To perform certain tasks using CLI and not directly via the software, CLI should assist in linking the software to perform certain tasks by simply writing commands. This includes beginning with login to logout, including any range of available functions to implement.	Medium	Approved
SRS-9	Interface Requirement	1.3.5 Communications interfaces In order to communicate to the internet, routers as an interface would be required, besides, fast ethernet for interface could be dedicated, and the computers or systems should be connected through LAN to communicate within the hotel.	Medium	Approved
SRS-10	Non-func. Requirement	1.3.6 Memory constraints The overall size of the software should be around 1GB to 2GB. When functioning, the software should occupy RAM, no more than 50 – 100 MB. The image of member having logged in to the system shouldn't exceed 500kB. Moreover, the password length should be minimum 5 and at max 8 characters.	High	Ready
SRS-11	Functional Requirement	1.3.7 Operations The software should run uniformly, without changing any mode because, the information about customers, rooms occupied, etc. is of prime focus. The manager can use the occupancy rate to set the tariff rates for the rooms and services. The backup of the data of the software should be kept so that the information remains intact and inconsistencies could be confronted caused due to some breakdown or failure in the system.	High	Reviewed
SRS-12	Interface Requirement	1.3.8 Site adaptation requirements Customers can try booking from the hotel's site and should be able to enter their required information. If they hold, they are assigned their room and the database is updated accordingly. Else, they receive regret message. If a person comes to the hotel to check-in then the same operations can be done.	High	Reviewed
SRS-13	Information	1.3.9 Interfaces with services The users will use the system as Software as a Service (SaaS). They work on the needs and do not handle the working and procedure of execution of software system.	Medium	
SRS-14	Functional Requirement	1.4 Product functions The functions performed by HAS are as follows: • Customer Registration • Check for Availability of rooms • Display the rates • Confirmation of Booking • Email notification • Payment • Manage booking details • Generate Report • Customer Service • Set room details • Issue Bill • Manage Customers • Manage Staff • Manage Rooms	High	Approved
SRS-15	Information	1.5 User characteristics • The prime users for the software are : • Hotel Manager • Receptionist • Customers **Hotel Manager:** Manager has every access to the hotel system. Manager is responsible for managing resources and staff. Manager can view customer information, booking information, feedback of customers		Ready

		using appropriate charts and statistics and make decisions accordingly. He can also adjust the prices of food and rooms. **Receptionist:** Hotel receptionist's purpose is to provide quality service to the customer. She has less access than the manager. She can manage booking details. She can search for availability of rooms and assign the rooms to customer if available and confirm the booking and update the booking details. **Customer:** Customers have access to view the vacant room information and price range. They should be able to confirm the booking and cancel it if necessary. Customer should at least be capable of using the web UI interface but not database.		
SRS-16	Information	## 1.6 Limitations In case of an error or failure, the system might not be able to update the database and fail to maintain consistency. Due to this there can be chances of happening billing errors, incorrect information and loss of reputation of the hotel.		Reviewed
SRS-17	Information	## 1.7 Assumptions and dependencies It is assumed that the application will be used in Windows and Linux. For other OS, the system might not prove compatible and functionalities and integrity with hardware should be changed at a practical level. In case of any difficulties, SRS should be flexible enough to change accordingly. For any reason if error occurs in the database, then the occupancy rate calculated proves wrong which leads to change in tariff and incorrect data and we need to make changes in the software's database.		Reviewed
SRS-18	Information	## 1.8 Definitions ● **Integrity:** System should focus on securing the customer information and avoid data losses as much as possible ● **Consistency:** The database should be well-maintained and always consistent to updates. ● **Correctness:** This system should satisfy the normal regular Hotel Management operations precisely to fulfill the end user objectives. ● **Maintainability:** The system should be maintainable. ● **Portability:** The system should run in any Microsoft Windows environment. ● **Atomicity:** Only one operation should be done at a time. Multiple users cannot use and update data so that anomalies can be avoided. ● **Availability:** The system should be available during normal hotel operating hours.		
SRS-19	Information	## 1.9 Acronyms and abbreviations **OS:** Operating System **CLI:** Command Line Interface **GUI:** Graphical User Interface		
SRS-20	Section	# 2 Requirements This section describes all the detailed functional requirements expected from HMS software.		
SRS-21	Information	## 2.1 External interfaces The customer's information like name, room number, room type and unique ID number will be provided as input to the customer. Other inputs also include food item, date, time consumed by the customer for the expenses. The system should output a confirmation or apology during room allotment, calculated occupancy rate for the tariff and also provide the bill with the amount payable by the customer.		
SRS-22	Functional Requirement	## 2.2 Functions The functions performed by the HAS are as follows: • **Online Reservation:** ◦ The customer should be able to sign up/ sign in on the website to check to book rooms. ◦ The software will display the number of rooms available for each category. The customer should be able to filter out rooms as per requirements like price, types of rooms, and so on. ◦ The category of rooms in the hotel will be AC/non-AC, single/double rooms. ◦ The customer will be able to book the rooms based on their preference with payment using credit/debit card, net banking and so on. ◦ Once the booking is confirmed, the software should send an email/SMS notification about successful booking. ◦ In case a customer wishes to cancel a booking, a specific percentage of amount should be deducted based on the number of days the booking is canceled before the stay. ◦ In case the preferred rooms are not available, an apology message should be generated on the screen. The software should also display the other available rooms. ◦ In case no rooms are available, the software should display an apology message. • **On the spot reservation:** ◦ The customer can book the rooms on the spot at the reception. ◦ The receptionist should be able to show the available rooms and book the rooms according the the customer preference. • **Room services:** ◦ The customer should be able to order food or other services online on the app/website. ◦ A notification should be sent to the customers on SMS once the order is placed and delivered. ◦ The hotel catering services manager should be able to input the number of times food or other services is ordered with date and time by the customer into the final bill. • **Check out:** ◦ At the time of check out, the software will generate the final bill. ◦ The bill will display the total amount costed to the customer and the balance amount payable by the customer. • **Customer feedback:** ◦ There will be a provision for recording the customer feedback whenever the customer checks out from the hotel on the website/application. ◦ Due to security/privacy reasons, the feedback information will be accessed only by the manager. • **Discounts:** ◦ Whenever a new customer is registered, a unique identity number will be assigned to that customer. ◦ Depending on the frequency of visit, credits will be assigned to that customer. Special discounts will be offered based on the frequency of visit of that customer. • **Managerial features:** ◦ The hotel catering manager has all the authority of the inventories. ◦ The catering staff should input the quantity and type of food consumed by the customer, their unique identification number along with their respective date and time. ◦ The system should also be able to analyze the feedback forms and generate appropriate charts and statistics for business analysis. This will help the hotel to make efforts to improve services and rates. ◦ The manager should be able to adjust room prices on special days like special days like festivals, government holidays and weekends, based on the occupancy rate.	High	Approved

SRS-23	Section	2.3 Usability requirements The software should be quite user friendly for even a newbie. The tasks performed by the software should be clearly manifested so that the user can track them in the system. The software should perform the jobs efficiently and in a well-structured manner so that the overall satisfaction of the user is elevated.	High	Ready
SRS-24	Section	2.4 Performance requirements The database of the software should be very consistent and structured well so that queries can run efficiently and updates can be made successfully. The system should support the interaction using CLI too. At a time, maximum 1 user can use the software. The tasks should be completed under 1 second 95 % of the time.	High	Ready
SRS-25	Section	2.5 Logical database requirements The database should consist of entities like rooms, user, customer, foods, bill, etc. Information about the entities can be stored via their attributes. The relationships room allotment to customer, the foods consumed by them, their expense, and billing. Customers can be identified using their uniquely assigned token numbers and frequent ones can be found using the allotted identity numbers which are meant for special discounts.	High	Reviewed
SRS-26	Section	2.6 Design constraints The overall software should be designed such that it meets the memory constraints and compatibility requirements. The design should allow scalability of the software so that the system does not crash. Running queries and extracting data can be made using SQL server, etc.	Medium	Ready
SRS-27	Section	2.7 Standards compliance All the expenses made by the customer should be reflected in the database as they will be used to bill them. The bills for the customer should be printed instantly upon their check out time. When the hotel manager prompts to see the occupancy rate, the room allotment or any customer details, the database should display the needed.		Ready
SRS-28	Section	2.8 Software system attributes **Reliability:** The software should be reliable so that the user can utilize its functionalities without worrying about inconsistencies and data storage. **Availability:** The system must be available all the time so that the it is guaranteed that the operations are accessible to the user even during an urgent task. **Security:** The software should be secure enough so that only trusted parties can use it and get access to the data and manipulate it. **Maintainability:** The software should be able to maintain the data stored so that necessary information is not lost or may not become incorrect. This can avoid losses for the hotel. **Portability:** The software should be portable so that the information and all necessary data from one host can be transferred to the other in case of change of a system by the user.		Reviewed
SRS-29	Section	3 Verification This software can be tested for a bunch of customers. If it supports all the requirements and necessities without failure, the software is verified for usage. Even renowned people or organizations might test this and qualify it as approved for usage as a formal application or not.	High	Ready
SRS-30	Section	4 Supporting information One might look for the functions for understanding various inputs and outputs for the software. More precise information might be obtained from the software description text. To conclude, the software should compute average occupancy rate per month to decide tariff rate for rooms, assign rooms to customers based on availability, store customer's room and expenses information and bill them during their check out time.		
SRS-31	Section	5 References - the project description provided by the user - https://dipeshagrawal.files.wordpress.com/2018/07/srs-hotel-management-system-ok.pdf		