

# Software Requirements Specification

## (SRS)

ADACTIN Application

**Author(s) : Suresh**

**Version : 3.0**

**Date First Issued:**

**Updated:**

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## 1. Introduction

This Software Requirements Specification (SRS) describes requirements for Adactin Operations. This SRS document describes the software functional and non-functional requirements of the Adactin System. This document is intended to be used by the members of the project team that will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are high priorities and committed for release.

### *Reference Documents*

Document Title	Version No

## 2.PURPOSE OF THE SYSTEM

To search a required hotel across different location. User is able to book a hotel and if required booking can be canceled by providing proper reason.

### **Scope of the System**

1. New user Registration
2. Login into application
3. Search a Hotel
4. Select a hotel
5. Booking a hotel
6. Order Id generation
7. Cancel order
8. Logout

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### **3.NUMBER OF MODULES**

The system after careful analysis has been identified to be presented with the following modules:

#### **The Modules involved are**

1. New User Registration
2. Login
3. Search Hotel
4. Select Hotel
5. Book Hotel
6. Order Generation
7. Booked Itinerary

#### **3.1 New User Registration:**

New user Registration is used to get login detail for the application. To start using this application first we need to complete new user registration by using below form.

**Navigation :**Launch Browser → Enter url → click on **New user Register Here** link



**New User Registration Form** (Fields marked with Red asterix (\*) are mandatory)

[Go back to Login page](#)

Username*	<input type="text"/>
Password*	<input type="password"/>
Confirm Password*	<input type="password"/>
Full Name*	<input type="text"/>
Email Address*	<input type="text"/>
Captcha Image	
Captcha Text*	<input type="text"/>
Terms/Conditions*	<input type="checkbox"/> I agree to <a href="#">Terms &amp; Conditions</a>
<input type="button" value="Register"/> <input type="button" value="Reset"/>	

Enter all the required fields and click on Register button .After some we need to receive an email from admin team with login detail.

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### 3.2 Login :

This module is used to login into application by using valid login details. in case of user entered in valid login details proper error message need to be displayed.

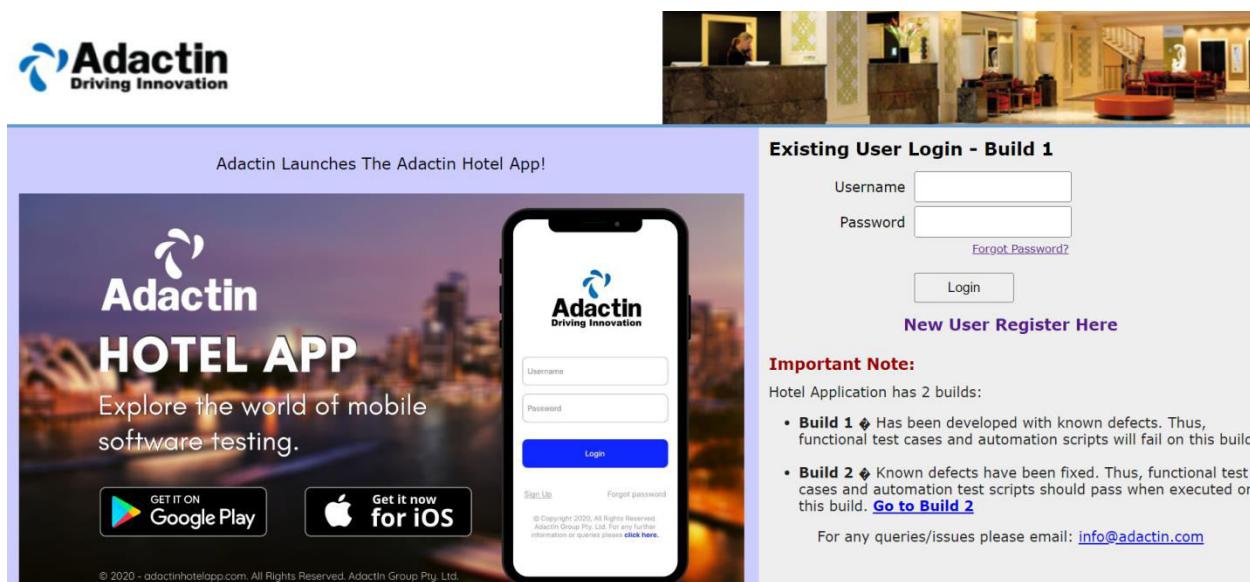
**Navigation :** Launch Browser → Enter url :

1. Login page should be open.
2. In Login Page Username and password Textboxes should be displayed along with the login button.
4. Enter valid username and password.
5. Click on Log in Button.
6. Search Hotel page need to be displayed

**→Login Page should be displayed with required fields as below:**

#### **Fields information:**

Company Logo, images, Welcome text, Login fields, links, Header and footer.



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### **3.3 Search Hotel :**

This module is used to search a required hotel by proving all the required inputs.

**Navigation :** Login into application → Search a Hotel

1.Login into application

2.Select all the required fields

3.Click on Search button

4.Select Hotel Page need to be displayed.



Welcome to Adactin Group of Hotels
Hello sureshit! [Search Hotel](#) | [Booked Itinerary](#) | [Change Password](#) | [Logout](#)

**Search Hotel** (Fields marked with Red asterix (\*) are mandatory)

Location*	<input type="text" value="- Select Location -"/>
Hotels	<input type="text" value="- Select Hotel -"/>
Room Type	<input type="text" value="- Select Room Type -"/>
Number of Rooms*	<input type="text" value="1 - One"/>
Check In Date*	<input type="text" value="11/09/2024"/> (dd/mm/yyyy)
Check Out Date*	<input type="text" value="12/09/2024"/> (dd/mm/yyyy)
Adults per Room*	<input type="text" value="1 - One"/>
Children per Room	<input type="text" value="0 - None"/>

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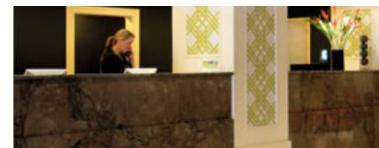
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### **3.4 Select Hotel :**

This module is used to select a required hotel by proving all the required inputs.

**Navigation :** Login into application → Search a Hotel → Select a Hotel

- 1.Login into application
- 2.Select all the required fields
- 3.Click on Search button
- 4.Select a required Hotel



Welcome to Adactin Group of Hotels
Hello Username! [Search Hotel](#) | [Booked Itinerary](#) | [Change Password](#) | [Logout](#)

#### Select Hotel

Select	Hotel Name	Location	Rooms	Arrival Date	Departure Date	No. of Days	Rooms Type	Price per Night	Total Price (excl. GST)
<input type="radio"/>	Hotel Cornice	Sydney	1 Rooms	11/09/2024	12/09/2024	1 Days	Standard	AUD \$ 100	AUD \$ 110
<input type="radio"/>	Hotel Creek	Sydney	1 Rooms	11/09/2024	12/09/2024	1 Days	Standard	AUD \$ 125	AUD \$ 135
<input type="radio"/>	Hotel Hervey	Sydney	1 Rooms	11/09/2024	12/09/2024	1 Days	Standard	AUD \$ 150	AUD \$ 160
<input type="radio"/>	Hotel Sunshine	Sydney	1 Rooms	11/09/2024	12/09/2024	1 Days	Standard	AUD \$ 175	AUD \$ 185

[Continue](#)
[Cancel](#)

### **3.5 Book a Hotel :**

This module is used to book a hotel by proving all the required inputs.

**Navigation :** Login into application → Search a Hotel → Select a Hotel → Book a hotel

1. Login into application
2. Select all the required fields
3. Click on Search button
4. Select a required Hotel
5. Provide all the required details
6. Click on Book now button
7. Order number should be generated

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Welcome to Adactin Group of Hotels

 Hello sureshit! [Search Hotel](#) | [Booked Itinerary](#) | [Change Password](#) | [Logout](#)
[Back](#)

### Book A Hotel

Hotel Name	Hotel Cornice
Location	Sydney
Room Type	Standard
Number of Rooms	1 Room(s)
Total Days	1 Day(s)
Price per Night	AUD \$ 100
Total Price	AUD \$ 110
GST	AUD \$ 11
Final Billed Price	AUD \$ 121
First Name*	<input type="text"/>
Last Name*	<input type="text"/>
Billing Address*	<input type="text"/>
Credit Card No.*	<input type="text"/> Use 16 digit Dummy Data
Credit Card Type*	- Select Credit Card Type -
Expiry Date*	- Select Month -
CVV Number*	<input type="text"/>

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### 3.6 Order Generation:

This module is used to refer order number had been generated.

**Navigation :** Login into application → Search a Hotel → Select a Hotel → Book a hotel → Order number should be auto-generated.

1. Login into application
2. Select all the required fields
3. Click on Search button
4. Select a required Hotel
5. Provide all the required details

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6. Click on Book now button
7. Order number should be auto-generated



Welcome to Adactin Group of Hotels      Hello sureshit! Search Hotel | Booked Itinerary | Change Password | Logout

### Booking Confirmation

Hotel Name	Hotel Cornice
Location	Sydney
Room Type	Deluxe
Arrival Date	11/09/2024
Departure Date	12/09/2024
Total Rooms	1 Room(s)
Adults Per Room	1 Adult(s)
Children per Room	0 Children
Price per Night	AUD \$ 100
Total Price	AUD \$ 110
GST	AUD \$ 11
Final Billed Price	AUD \$ 121
First Name	suresh
Last Name	
Billing Address	hyderabad
Order No.	2LB861WR75

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### 3.7 Booked Itinerary:

This module is used to confirm booking details by providing valid order number.

**Navigation:** Login into application → Click on Booked Itinerary link → Enter valid Order number.

1. Login into application
2. Click on Booked Itinerary link
3. Enter valid Order number



Welcome to Adactin Group of Hotels      Hello sureshit! Search Hotel | Booked Itinerary | Change Password | Logout

<b>Booked Itinerary</b>													Search Order Id <input type="text"/> Go	
<input type="checkbox"/>	Order Id	Cancel	Hotel Name	Location	Rooms	First Name	Last Name	Arrival Date	Departure Date	No. of Days	Rooms Type	Price per Night	Total Price (incl. GST)	
<input type="checkbox"/>	2LB861WR75	Cancel 2LB861WR75	Hotel Cornice	Sydney	1 Rooms	suresh	k	11/09/2024	12/09/2024	1 Days	Standard	AUD \$ 10	AUD \$ 12	

[Cancel Selected](#) [Search Hotel](#) [Logout](#)

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### 4. Functional components of the project

Following are the functional needs of the system. More functionality can be Added to enhance the application.

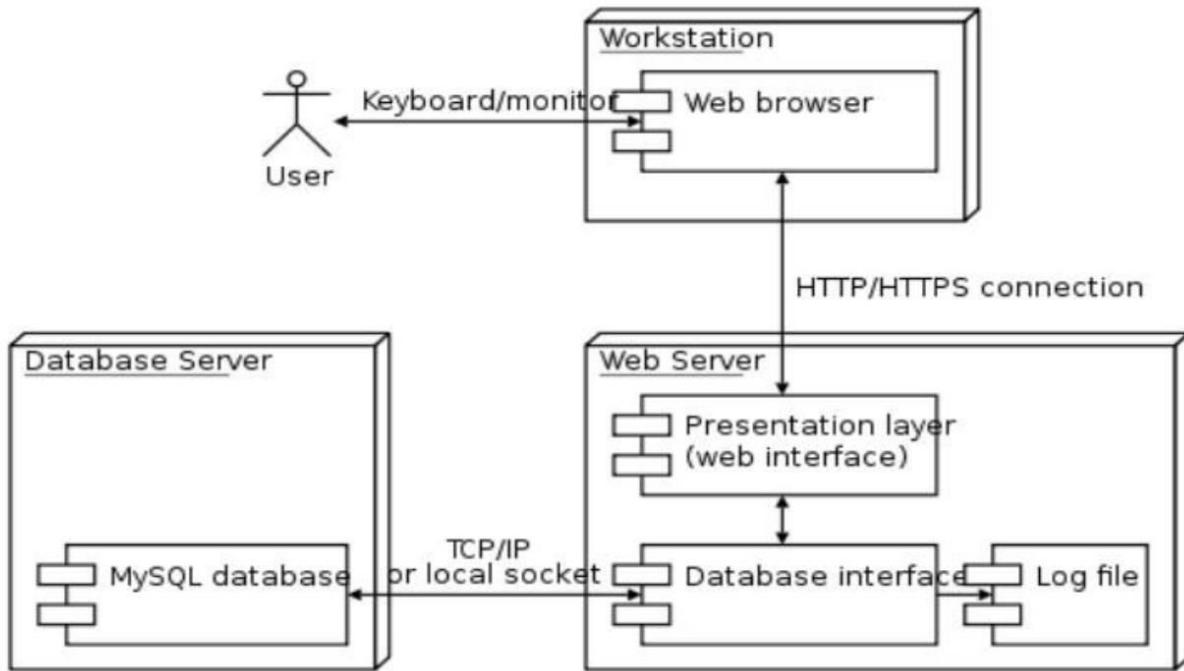
1. User must have a valid User Id and password to login to the system
2. If a wrong password is given thrice in succession, that account will be locked and the customer will not be able to use it. When an invalid password is entered a warning is given to the user that his account is going to get locked.
3. After the valid user logs then search hotel page need to be displayed
4. User need be able to provide all the required fields
5. On clicking Search button Select Hotel page need to displayed
6. User should be able to select required hotel and on clicking on Continue button
7. User had to enter all the personal detail including payment details and On clicking book now button Order Id need to be generated
8. With the order number need to able to book confirmation details and if Required need to able to cancel the booking.

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## 5. Deployment Diagrams



## 6. APPLICATION DEVELOPMENT:

### N-Tier Applications:

N-Tier Applications can easily implement the concepts of Distributed Application Design and Architecture. The N-Tier Applications provide strategic benefits to Enterprise Solutions. While 2-tier, client-server can help us create quick and easy solutions and may be used for Rapid Prototyping, they can easily become a maintenance and security night mare

The N-tier Applications provide specific advantages that are vital to the business continuity of the enterprise. Typical features of a real life n-tier may include the following:

- Security
- Availability and Scalability
- Manageability
- Easy Maintenance
- Data Abstraction

The above mentioned points are some of the key design goals of a successful n-tier application that intends to provide a good Business Solution.

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### Definition:

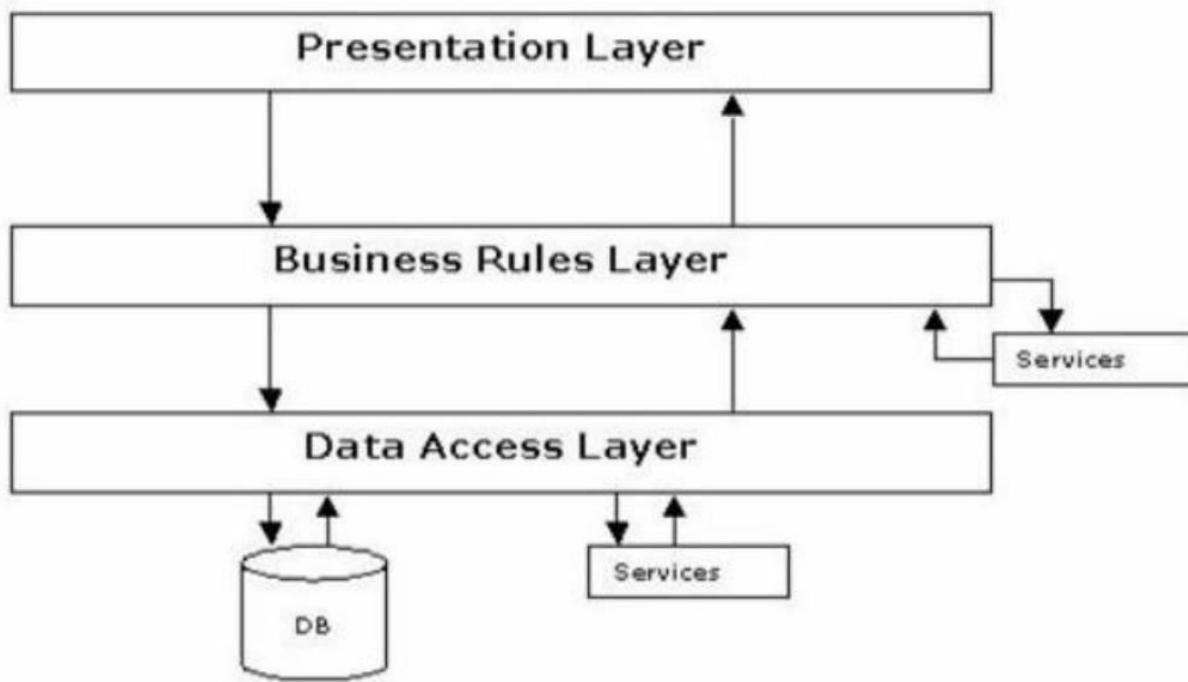
Simply stated, an n-tier application helps us distribute the overall functionality into various tiers or layers:

- Presentation Layer
- Business Rules Layer
- Data Access Layer
- Database/Data Store

Each layer can be developed independently of the other provided that it adheres to the standards and communicates with the other layers as per the specifications.

This is the one of the biggest advantages of the n-tier application. Each layer can potentially treat the other layer as a ‘Block-Box’.

In other words, each layer does not care how other layer processes the data as long as it sends the right data in a correct format.



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## **1. The Presentation Layer:**

Also called as the client layer comprises of components that are dedicated to presenting the data to the user. For example: Windows/Web Forms and buttons, edit boxes, Text boxes, labels, grids, etc.

## **2. The Business Rules Layer:**

This layer encapsulates the Business rules or the business logic of the encapsulations. To have a separate layer for business logic is of a great advantage. This is because any changes in Business Rules can be easily handled in this layer. As long as the interface between the layers remains the same, any changes to the functionality/processing logic in this layer can be made without impacting the others. A lot of client-server apps failed to implement successfully as changing the business logic was a painful process.

## **3. The Data Access Layer:**

This layer comprises of components that help in accessing the Database. If used in the right way, this layer provides a level of abstraction for the database structures. Simply put changes made to the database, tables, etc do not affect the rest of the application because of the Data Access layer. The different application layers send the data requests to this layer and receive the response from this layer.

## **4. The Database Layer:**

This layer comprises of the Database Components such as DB Files, Tables, Views, etc. The Actual database could be created using Mysql, Oracle etc. In an n-tier application, the entire application can be implemented in such a way that it is independent of the actual Database. For instance, you could change the Database Location with minimal changes to Data Access Layer. The rest of the Application should remain unaffected

## **7. PERFORMANCE REQUIREMENTS:**

Performance is measured in terms of the output provided by the application. Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely in the part of the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements. It is very difficult to

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change the system once it has been designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use.

The requirement specification for any system can be broadly stated as given below:

- The system should be able to interface with the existing system
- The system should be accurate
- The system should be better than the existing system

The existing system is completely dependent on the user to perform all the duties.

## 8. Specifications:

### Software Specifications

- **Operating System:** Windows
- **Database Server :** MySQL
- **Client :** Java Script
- **Tools :** Xampp
- **User Interface :** HTML with Ajax
- **Code Behind :** PHP
- **Web server :** Apache

### Hardware Specification:

- **Processor :** Dual Core
- **RAM :** 1GB Ram
- **Hard Disk :** PC with 20GB

### Approvals:

Name	Signature	Date

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## 9. Adactin Project -- Agile process Requirements

### Product Backlog

#### 1. User Registration

- Allow users to sign up with their personal information.
- Implement email confirmation for account activation.

#### 2. User Login

- Implement login functionality with email and password.
- Add password recovery feature.

#### 3. Search for Hotels

- Enable users to search for hotels by location, check-in/check-out dates, and other criteria.
- Implement basic search filters (e.g., price, rating).

#### 4. View Hotel Details

- Display detailed hotel information including amenities, room types, and pricing.
- Include images and customer reviews in the details page.

#### 5. Book a Hotel Room

- Allow users to select room type and make a booking.
- Implement booking confirmation and email notification.

#### 6. Payment Processing

- Integrate payment gateway for secure transactions.
- Ensure payment confirmation and invoice generation.

#### 7. Manage Bookings

- Enable users to view their bookings (upcoming and past).
- Allow booking modifications and cancellations according to hotel policies.

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## Epics

### 1. User Account Management:

- **Description:** This epic covers all functionalities related to user account creation, authentication, and profile management.
- **User Stories Included:**
  - User Registration
  - User Login
  - Password Recovery
  - Edit User Profile
  - View Account Details

### 2. Hotel Search and Filtering:

- **Description:** This epic includes the ability for users to search for hotels, apply filters, and sort results to find accommodations that best meet their needs.
- **User Stories Included:**
  - Search for Hotels
  - Filter Hotel Results
  - Sort Hotel Results
  - View Hotel Details

### 3. Hotel Booking Process:

- **Description:** This epic covers the entire process of selecting a hotel, choosing a room, and completing the booking.
- **User Stories Included:**
  - Select Room Type and Availability
  - Review Booking Details
  - Apply Discount Codes
  - Confirm Booking
  - Payment Processing

### 4. Booking Management:

- **Description:** This epic involves managing existing bookings, including viewing, modifying, or canceling reservations.
- **User Stories Included:**
  - View Upcoming and Past Bookings
  - Modify Booking Details

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- Cancel Booking
- Rebook a Hotel

## 5. User Reviews and Ratings:

- **Description:** This epic allows users to leave feedback on their hotel experiences and read reviews left by others.
- **User Stories Included:**
  - Leave a Review for a Hotel
  - Rate a Hotel Stay
  - Upload Photos with Reviews
  - View Other Users' Reviews and Ratings

## 6. Payment and Billing Management:

- **Description:** This epic involves handling payments, generating invoices, and managing billing information.
- **User Stories Included:**
  - Secure Payment Processing
  - View and Download Invoices
  - Update Billing Information
  - Apply for Refunds or Cancellations

## 7. Admin Management:

- **Description:** This epic is focused on the administrative functions of the application, including hotel management, user management, and review moderation.
- **User Stories Included:**
  - Add or Edit Hotel Listings
  - Manage Room Availability
  - Review and Moderate User Feedback
  - View and Manage User Bookings
  - Generate Reports on App Usage

## 8. Notifications and Alerts:

- **Description:** This epic covers the system's ability to notify users and admins about important events, such as booking confirmations, cancellations, and special offers.
- **User Stories Included:**
  - Send Booking Confirmation Notifications
  - Alert Users of Upcoming Stays
  - Notify Users of Cancellations or Changes
  - Admin Alerts for Low Availability
  - Promotional Notifications for Users

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## User Stories

### 1. User Registration:

- **As a new user,** I want to create an account on the Adactin Hotel app **so that** I can book hotels using the platform.
- **Acceptance Criteria:**
  - The user should be able to enter personal details such as name, email, password, and contact information.
  - The system should validate the user details and display relevant error messages for incorrect entries.
  - The user should receive a confirmation email upon successful registration.

### 2. User Login:

- **As a registered user,** I want to log into the Adactin Hotel app **so that** I can access my account and manage bookings.
- **Acceptance Criteria:**
  - The user should be able to log in using their registered email and password.
  - The system should provide an option to recover a forgotten password.
  - The system should maintain session security and time out after a period of inactivity.

### 3. Search for Hotels:

- **As a user,** I want to search for hotels based on location, check-in, and check-out dates **so that** I can find available accommodations that meet my needs.
- **Acceptance Criteria:**
  - The user should be able to input search criteria such as city, hotel name, room type, check-in, and check-out dates.
  - The system should display a list of available hotels that match the search criteria.
  - The user should be able to filter results based on price, rating, and other amenities.

### 4. View Hotel Details:

- **As a user,** I want to view detailed information about a hotel **so that** I can decide if it meets my requirements.

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- **Acceptance Criteria:**

- The user should be able to view information such as hotel description, room types, pricing, and amenities.
- The system should provide images of the hotel and its rooms.
- The user should be able to read reviews and ratings from other customers.

**5. Book a Hotel Room:**

- **As a user,** I want to book a room at a hotel **so that** I can confirm my stay.

- **Acceptance Criteria:**

- The user should be able to select a room type, number of rooms, and the number of guests.
- The system should calculate the total cost based on the user's selection.
- The user should be able to review and confirm their booking details before finalizing the reservation.

**6. Payment Processing:**

- **As a user,** I want to make a secure payment for my hotel booking **so that** my reservation is confirmed.

- **Acceptance Criteria:**

- The user should be able to choose from multiple payment options such as credit card, debit card, and online wallets.
- The system should securely process the payment and provide a confirmation receipt.
- The user should receive an email confirmation with booking details.

**7. Manage Bookings:**

- **As a user,** I want to view and manage my hotel bookings **so that** I can make changes or cancellations if needed.

- **Acceptance Criteria:**

- The user should be able to view a list of all their bookings, both upcoming and past.
- The user should be able to cancel or modify bookings as per the hotel's cancellation policy.
- The system should update the booking status and send confirmation of any changes made.

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#### 8. Leave a Review:

- **As a user,** I want to leave a review for a hotel I stayed at **so that** I can share my experience with other users.
- **Acceptance Criteria:**
  - The user should be able to rate their stay and leave a written review.
  - The system should allow users to upload images with their reviews.
  - The system should moderate reviews for inappropriate content before publishing them.

#### 9. Admin Management:

- **As an admin,** I want to manage the hotel's data, bookings, and user reviews **so that** the platform remains up to date and functional.
- **Acceptance Criteria:**
  - The admin should be able to add, edit, or remove hotel listings.
  - The admin should be able to view and manage all user bookings.
  - The admin should be able to moderate and manage user reviews.

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# **Software Requirements Specification**

## **(SRS)**

### **API Documentation**

**Author(s) : Suresh**

**Version : 3.1**

**Date First Issued:**

**Updated:**

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**API Testing :** API stands for Application Programming Interface which acts as an intermediate of communication between two applications. Due to this intermediary role of API (Application Programming Interface) two applications talk to each other and performs the required actions efficiently. API contains a set of rules and guidelines based on which the applications are developed. So in simple we can say an API acts as an interface between two software applications so that two software applications can communicate with each other. In API Testing, instead of using standard user inputs(keyboard) and outputs,

you use software to send calls to the API, get output, and note down the system's response. API tests are very different from GUI Tests and won't concentrate on the look and feel of an application. It mainly concentrates on the business logic layer of the software architecture.

### **As part of API testing need to test below functionality**

- Data accuracy.
- Response time.
- Duplicate or missing functionality.
- Authorization checks.
- Multithreaded issues.
- Security and performance issues.
- Error codes if API returns.
- Reliability issues.

#### **1.url format**

protocal://serverAddress/queryparameters/endpoint  
<https://reqres.in/api/users?page=2>

#### **2. HTTP response status codes**

The server should always return the right HTTP status code to the client.

Standard HTTP status codes

200 – OK – Everything is working

201 – OK – New resource has been created

204 – OK – The resource was successfully deleted

304 – Not Modified – The client can use cached data

400 – Bad Request – The request was invalid or cannot be served. The exact error should be explained in the error payload. E.g. „The JSON is not valid“

401 – Unauthorized – The request requires a user authentication

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403 – Forbidden – The server understood the request but is refusing it or the access is not allowed.

404 – Not found – There is no resource behind the URI.

422 – Unprocessable Entity – Should be used if the server cannot process the entity, e.g. if an image cannot be formatted or mandatory fields are missing in the payload.

500 – Internal Server Error

Request	GET	POST	PUT	DELETE
Status Code	200	201	200	204

### 3. Common Functionality of API Testing

protocal//serverAddress/queryparameters/endpoint

<https://reqres.in/api/users?page=2>

- 3.1. url should be work with only https protocol
- 3.2. Domain address should be followed by .in/.com/.info
- 3.3. Server address should be reqres.in
- 3.4. Query parameter should be working with ? symbol
- 3.5. Special characters should be accepted only // : ? + &

### 4. Status Code Fun:

#### 4.1. GET Request

Single user : To retrieve one user information

Query: <https://reqres.in/api/users/2>

**Result : 200**

```
{
  "data": { "id": 2, "email": "janet.weaver@reqres.in", "first_name": "Janet",
  "last_name": "Weaver", "avatar": "https://reqres.in/img/faces/2-image.jpg"
}
```

**List users :** To get list of users information Query :

<https://reqres.in/api/users?page=2>

**Result : 200**

```
{
  "page": 2, "per_page": 6, "total": 12, "total_pages": 2, "data": [
  {
    "id": 7, "email": "michael.lawson@reqres.in", "first_name": "Michael",
    "last_name": "Lawson", "avatar": "https://reqres.in/img/faces/7-image.jpg"
  }
]
```

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```

},
{
"id": 8,"email": "lindsay.ferguson@reqres.in", "first_name": "Lindsay",
"last_name": "Ferguson","avatar": "https://reqres.in/img/faces/8-image.jpg"
},
{
"id": 9,"email": "tobias.funke@reqres.in", "first_name": "Tobias", "last_name": "Funke","avatar": "https://reqres.in/img/faces/9-image.jpg"
},
{
"id": 10,"email": "byron.fields@reqres.in", "first_name": "Byron", "last_name": "Fields","avatar": "https://reqres.in/img/faces/10-image.jpg"
},
{
"id": 11,"email": "george.edwards@reqres.in", "first_name": "George",
"last_name": "Edwards","avatar": "https://reqres.in/img/faces/11-image.jpg"
},
{
"id": 12,"email": "rachel.howell@reqres.in", "first_name": "Rachel", "last_name": "Howell","avatar": "https://reqres.in/img/faces/12-image.jpg"
}
],

```

#### 4.2. POST Request

POST : To insert the data to server Query : <https://reqres.in/api/users>

Body : {  
 "name": "Suresh",  
 "job": "Trainer"  
 }

**Result:** 201 , ID should be generated along with **Created AT** Message should be displayed.

#### 4.3. PUT Request

PUT : To update the data to server Query : <https://reqres.in/api/users/2>

Body : {  
 "name": "Suresh",  
 "job": "softwareTrainer"  
 }

**Result :** 200 , **Updated AT** Message should be displayed

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#### **4.4. DELETE Request**

POST : To Delete the data from server Query : <https://reqres.in/api/users/2>

Body : { }

**Result :** 204

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