

Homestay Booking App

Complete QA Artefact Pack

Prepared by: Suraj Navigire | ISTQB CTFL Certified QA Engineer

Includes: Project Understanding · Test Plan · Test Scenarios · 90 Test Cases · Recommendations

90

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1. Project Understanding

PROJECT UNDERSTANDING DOCUMENT — Homestay Booking Web Application

1. Project Background

Mr. Chirag owns a large house on the outskirts of Nainital. Due to his business commitments in Delhi, he decided to rent the property as a homestay. To manage this efficiently, he commissioned a web-based booking application. A caretaker is assigned on-site to manage bookings and handle check-in/check-out, while a servant assists with catering and logging. The house owner monitors all bookings remotely.

2. Actors (User Roles)

Role	Description
Guest	End user who searches, books, modifies and cancels homestay reservations.
Caretaker	On-site manager who handles check-in/out, updates ID proofs and payments.
House Owner	Remote owner who monitors all bookings in read-only mode.
Security	Assists with on-site security and access management.

3. Use Case Summary

3.1 Guest

- Sign up using Name and Phone Number
- OTP generated on sign-up to verify phone number
- Login using registered phone number and OTP
- View homestay availability for selected dates
- Book an available homestay
- Receive SMS confirmation of booking
- View all personal bookings
- Modify a future booking (dates)
- Cancel a future booking

3.2 Caretaker

- Login using phone number and OTP
- View all bookings and guest contact information
- Update guest identity proof on booking
- Update payment details and confirm booking
- At checkout: update final payment and collect guest review

3.3 House Owner

- Login using phone number and OTP
- View all homestay bookings (read-only)
- View individual booking with guest information and identity proof

4. Key Business Rules Identified

- Each booking must have a unique Booking ID.
- Dates must not conflict — a room cannot be double-booked.

- OTP is required for all logins; sessions must expire after inactivity.
- Guests can only modify/cancel future bookings.
- Caretaker must confirm identity proof and payment before check-in.
- House Owner has read-only access; no modify or cancel permissions.
- SMS notifications must be sent on booking confirmation and cancellation.

5. QA Observations & Risks

Risk Area	Detail
Race Condition Risk	Two users booking the same room simultaneously must be handled.
OTP Rate Limiting	Must be enforced to prevent SMS abuse / brute force.
Role-Based Access Control	Must be strictly enforced across all three actors.
Payment Gateway	No explicit mention — assumed caretaker enters payment manually.
Identity Proof Type	Aadhaar/PAN etc. not specified — needs clarification.
SMS Delivery SLA	Not defined — should be specified for OTP and confirmation messages.

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2. Test Plan

TEST PLAN DOCUMENT — Homestay Booking Web Application

1. Introduction

This Test Plan document defines the strategy, scope, resources, schedule, and activities for testing the Homestay Booking Web Application developed for Mr. Chirag. The application enables guests to search and book homestay accommodations, caretakers to manage bookings, and the house owner to monitor all bookings.

2. Test Objectives

- Verify all functional requirements as defined in the project use cases
- Ensure positive and negative scenarios are covered for all user roles
- Validate OTP-based authentication is secure and reliable
- Confirm booking lifecycle (create, modify, cancel, checkout) works correctly
- Verify role-based access control (Guest, Caretaker, House Owner)
- Validate data integrity – bookings, payments, identity proofs stored correctly
- Ensure the application is responsive and works on major browsers and mobile

3. Scope of Testing

3.1 In Scope

- Guest: Signup, OTP verification, Login, Search availability, Book, Modify, Cancel
- Caretaker: Login, View all bookings, Contact guest, Update ID proof & payment, Confirm, Checkout
- House Owner: Login, View all bookings, View individual booking with guest ID proof
- Notifications: SMS on booking confirmation and cancellation
- Security: OTP masking, session timeout, direct URL access protection, RBAC
- UI Validation: Mandatory field checks, error messages, responsiveness
- Cross-browser: Chrome (primary), Mobile browser

3.2 Out of Scope

- Backend API performance / load testing
- Third-party SMS gateway infrastructure testing
- Database backup and recovery testing
- Penetration testing / security audit

4. Test Approach

The testing approach will follow a Black-Box functional testing methodology, covering both manual testing and structured exploratory testing. The following test types will be executed:

Test Type	Description
Functional Testing	Verify each feature works as per requirements.
Boundary Value Analysis	Test edge cases for inputs like dates, amounts, character limits.
Negative Testing	Validate system behaviour with invalid, empty or out-of-range inputs.
Role-Based Testing	Ensure each actor (Guest/Caretaker/Owner) sees only permitted screens.

Test Type	Description
Exploratory Testing	Ad-hoc testing to uncover unexpected defects.
UI / Usability Testing	Check field labels, error messages, responsiveness, and layout.

5. Test Environment

Component	Details
Browser	Google Chrome (latest), Mobile Browser (Android/iOS)
Environment	Staging / Test environment
Devices	Desktop (Windows/Mac), Mobile (Android)
Test Data	Manually prepared test data for all roles and scenarios

6. Entry and Exit Criteria

6.1 Entry Criteria

- Application build is deployed and accessible in test environment
- Requirements document / use cases are reviewed and signed off
- Test cases are reviewed and ready for execution
- Test environment and test data are set up

6.2 Exit Criteria

- All planned test cases have been executed
- All High and Medium priority defects are fixed and re-tested
- No open Critical/High priority defects remaining
- Test execution summary and defect report are prepared
- Sign-off received from project stakeholder

7. Risks and Mitigation

Risk	Impact	Mitigation
Test environment instability	High	Coordinate with dev team for stable environment
Incomplete requirements	Medium	Flag gaps and get clarifications before execution
SMS gateway unavailability	Medium	Use mock/stub SMS service in test environment
Resource unavailability	Low	Plan schedule with buffer time

8. Roles and Responsibilities

Role	Responsibility
QA Engineer (Suraj Navgire)	Test planning, test case authoring, execution, defect logging, reporting
Developer	Defect fixes, environment setup, build deployment
Project Stakeholder	Requirements sign-off, UAT sign-off

9. Test Deliverables

- Test Plan Document
- Test Scenario Document
- Test Case Document (Excel) – 90 test cases
- Defect Report / Bug Log
- Test Execution Summary Report

10. Test Schedule

Activity	Estimated Effort
Requirements Review & Test Planning	1 day
Test Case Design	2 days
Test Execution	3 days
Defect Reporting & Retesting	1 day
Final Report & Sign-off	1 day

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3. Test Scenarios

TEST SCENARIO DOCUMENT — Homestay Booking Web Application

What is a Test Scenario?

A Test Scenario is a high-level statement describing what to test. It represents a user goal or a business flow and maps to one or more test cases. Test scenarios ensure broad coverage without getting into step-by-step detail.

Test Scenario Matrix

Scenario ID	Module	Scenario Title
TS_001	Guest	Guest Registration & OTP Verification
TS_002	Guest	Guest Login & Authentication
TS_003	Guest	Session Management & Security
TS_004	Guest	Homestay Availability Search
TS_005	Guest	Booking a Homestay
TS_006	Guest	Booking Data Integrity
TS_007	Caretaker	Payment Management
TS_008	Guest	Booking Modification
TS_009	Guest	Booking Cancellation
TS_010	Caretaker	Caretaker Login & Booking Management
TS_011	Caretaker	Checkout Process
TS_012	House Owner	Owner Login & Booking Monitoring
TS_013	Guest	Guest Review Submission
TS_014	UI/Security	UI Validation & Security Checks

4. Test Cases

TC ID	Module	Type	Test Case Title	Priority
TC_001	Guest	Positive	Valid signup with correct name & phone number	High
TC_002	Guest	Negative	Signup with empty Name field	High
TC_003	Guest	Negative	Signup with empty Phone field	High
TC_004	Guest	Negative	Signup with invalid phone (less than 10 digits)	High
TC_005	Guest	Negative	Signup with more than 10 digits in phone	Medium
TC_006	Guest	Negative	Signup with alphabets in phone field	High
TC_007	Guest	Negative	Signup with special characters in Name	Medium
TC_008	Guest	Negative	Signup with already registered phone number	High
TC_009	Guest	Positive	OTP generated and received after valid signup	High
TC_010	Guest	Negative	OTP expires after defined time limit	Medium
TC_011	Guest	Negative	Multiple OTP requests in short time (rate limiting)	High
TC_012	Guest	Positive	OTP received within expected time SLA	Medium
TC_013	Guest	Positive	Valid login with registered phone + correct OTP	High
TC_014	Guest	Negative	Login with unregistered phone number	High
TC_015	Guest	Negative	Login with wrong OTP	High
TC_016	Guest	Negative	Login with expired OTP	High
TC_017	Guest	Negative	Login without entering OTP	High
TC_018	Guest	Positive	Resend OTP sends new code	Medium
TC_019	Guest	Negative	Old OTP invalid after resend	Medium
TC_020	Guest	Positive	User stays logged in after successful auth	Medium
TC_021	Guest	Negative	Session timeout after inactivity	Medium
TC_022	Guest	Negative	Login with empty phone field	High
TC_023	Guest	Negative	Direct URL access to dashboard without login	High
TC_024	Guest	Negative	Session invalidated after logout	High

TC ID	Module	Type	Test Case Title	Priority
TC_025	Guest	Positive	View homestay availability for valid date range	High
TC_026	Guest	Negative	Search with past check-in date	High
TC_027	Guest	Negative	Check-out date before check-in date	High
TC_028	Guest	Negative	Search without entering mandatory dates	Medium
TC_029	Guest	Positive	Search results load with matching properties	High
TC_030	Guest	Negative	Same date for check-in and check-out	Medium
TC_031	Guest	Positive	Book an available homestay	High
TC_032	Guest	Positive	Unique Booking ID generated after booking	High
TC_033	Guest	Positive	Booking confirmation SMS received	High
TC_034	Guest	Positive	View booking summary before confirming	Medium
TC_035	Guest	Negative	Book homestay for already occupied dates	High
TC_036	Guest	Negative	Book without being logged in	High
TC_037	Guest	Negative	Book for single day (same check-in/checkout)	Medium
TC_038	Guest	Negative	Double-click Book button	High
TC_039	Guest	Negative	Two users book same room simultaneously	High
TC_040	Guest	Positive	Booking details stored correctly in system	High
TC_041	Guest	Positive	Book for extended long stay (30+ days)	Medium
TC_042	Guest	Positive	Book minimum valid stay (1 night)	High
TC_043	Guest	Negative	Guest overlapping bookings (same guest, conflicting dates)	High
TC_044	Guest	Negative	Booking with invalid/missing guest details	Medium
TC_045	Caretaker	Positive	Caretaker updates payment for a booking	High
TC_046	Caretaker	Negative	Payment update with negative amount	Medium
TC_047	Caretaker	Negative	Payment update with alphabets in amount	Medium
TC_048	Caretaker	Negative	Payment update with mandatory fields empty	High
TC_049	Caretaker	Positive	Payment status updates after caretaker confirmation	High
TC_050	Caretaker	Negative	Payment failure handling	High

TC ID	Module	Type	Test Case Title	Priority
TC_051	Caretaker	Positive	Payment receipt generation after payment	Medium
TC_052	Caretaker	Positive	Caretaker updates payment & review at checkout	High
TC_053	Guest	Positive	Modify booking dates to available dates	High
TC_054	Guest	Negative	Modify booking to unavailable dates	High
TC_055	Guest	Negative	Modify booking after check-in date has passed	Medium
TC_056	Guest	Positive	Updated booking details reflected correctly	Medium
TC_057	Guest	Negative	Modify booking with invalid guest count	Medium
TC_058	Guest	Negative	Modify booking to past check-in date	High
TC_059	Guest	Negative	Modify booking: checkout before check-in	High
TC_060	Guest	Positive	Cancel a future booking successfully	High
TC_061	Guest	Positive	Cancellation confirmation message displayed	Medium
TC_062	Guest	Positive	SMS notification received on cancellation	Medium
TC_063	Guest	Positive	Booking status updates to Cancelled	High
TC_064	Guest	Negative	Cancel an already cancelled booking	Medium
TC_065	Guest	Negative	Cancel booking after checkout	Medium
TC_066	Guest	Negative	Cancel booking during active check-in	Medium
TC_067	Caretaker	Positive	Caretaker valid login with phone + OTP	High
TC_068	Caretaker	Positive	View all bookings with guest & date info	High
TC_069	Caretaker	Positive	View guest contact details from booking	High
TC_070	Caretaker	Positive	Update guest identity proof on booking	High
TC_071	Caretaker	Positive	Confirm booking after ID + payment verified	High
TC_072	Caretaker	Negative	Confirm booking without identity proof	High
TC_073	Caretaker	Positive	Update guest review at checkout	Medium
TC_074	Caretaker	Negative	Submit empty review at checkout	Medium
TC_075	Caretaker	Negative	Caretaker cannot access owner dashboard	High
TC_076	House Owner	Positive	Owner valid login with phone + OTP	High

TC ID	Module	Type	Test Case Title	Priority
TC_077	House Owner	Positive	Owner views all homestay bookings	High
TC_078	House Owner	Positive	Owner views individual booking with guest & ID proof	High
TC_079	House Owner	Positive	Owner views revenue / payment summary	Medium
TC_080	House Owner	Negative	Owner cannot modify or confirm bookings	High
TC_081	House Owner	Positive	Owner filters bookings by date range	Medium
TC_082	House Owner	Negative	Unauthorized user cannot access owner module	High
TC_083	Guest	Positive	Guest submits review after checkout	Medium
TC_084	Guest	Negative	Review submission before checkout	Medium
TC_085	Guest	Negative	Review submitted with blank comment	Medium
TC_086	Guest	Negative	Extremely long review text	Low
TC_087	UI	Positive	Mandatory fields marked with * and validated	Medium
TC_088	UI	Negative	Application shows loader during slow network	Medium
TC_089	Security	Negative	OTP masked while entering (not visible as plain text)	High
TC_090	Security	Positive	Application works correctly on Chrome & mobile	Medium

5. QA Recommendations

#	Recommendation	Priority
1	OTP expiry timer should be shown on screen to inform the user before it expires.	High
2	Limit OTP resend attempts (e.g., max 3 per session) to avoid SMS flooding abuse.	High
3	Prevent double booking: lock the room record during booking transaction.	High
4	Send booking confirmation and cancellation SMS to guest immediately.	High
5	Add proper numeric validation and range check for payment amount field.	High
6	Session timeout should redirect to login with a clear 'Session expired' message.	High
7	OTP field should mask the entered value for security.	High
8	Direct URL access to protected pages must redirect unauthenticated users to login.	High
9	Enforce role-based access control: Guest, Caretaker, and Owner must not access each other's modules.	High
10	Guest identity proof (Aadhaar etc.) should be partially masked in owner view for privacy.	Medium
11	Show a loading spinner while booking or payment requests are being processed.	Medium
12	Add 'My Booking History' section for guests to view past and cancelled bookings.	Medium
13	Error messages should be user-friendly, specific, and placed close to the relevant field.	Medium
14	Add booking modification confirmation SMS similar to new booking SMS.	Medium
15	Payment receipt should be downloadable as PDF from the app.	Medium
16	Review submission should only be enabled after checkout is completed.	Medium
17	Add a character counter for the review/comment field.	Low
18	Application should be tested on Chrome, Firefox, Safari, and major Android/iOS devices.	Low
19	Add data pagination for caretaker and owner booking lists (avoid loading all at once).	Low
20	Consider adding a search/filter option on booking lists for caretaker and owner views.	Low