School of Computer & Information Sciences

SOFTWARE TESTING & EVALUATION

For

Accommodation Management

of

Naga Venture

Software Engineering

(BCS324L/BIT324L)

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1. UNIT TESTING

Component	**Test Case**	**Expected Output**	**Error Handling**
Add Accommodation	Add with complete and valid data	Accommodation is saved	Error if name already exists or required fields are missing
	Add with missing required fields	Validation error shown	Prevent form submission
	Add with special characters in name	Saved or sanitized	Ensure name is clean and searchable
Update Accommodation	Update existing accommodation info	Information updated	Error if accommodation does not exist
	Update with blank fields	Validation error	Block empty field submission
Remove Accommodation	Delete accommodation with no reservations	Accommodation removed	Show warning and option to transfer reservations
	Delete accommodation with active reservations	Error - Cannot delete	Empty list with "no data found" message if none exist
Add Room	Add room to valid accommodation	Room saved	Error if room name exists in that accommodation
	Add room with invalid price (negative or 0)	Validation error	Prevent submission
	Add room with no capacity	Validation error	Must require room capacity
Update Room	Update room price and description	Updated successfully	Error if room not found
Remove Room	Remove unbooked room	Deleted successfully	Prevent if linked to bookings
	Remove booked room	Error message	Restrict and suggest archival
Room Listing	View rooms under a valid accommodation	Room list displayed	Empty list with fallback message if none
Accept Reservation	Approve a pending reservation	Status changed to "Accepted."	Block if already canceled or

			declined
Decline Reservation	Decline a pending reservation	Status updated	Error if already accepted
Cancel Reservation	Cancel reservation by admin	Status set to "Canceled"	Prevent cancel if already completed
Search Accommodation	Search by valid keyword	Matching results shown	No result message if keyword yields no matches
	Search with blank input	Show all accommodations	Optionally block search with empty filters
	Search by unavailable date	No accommodations found	Prompt user to select other dates
Room Reservation	Reserve available room with valid date range	Reservation saved and confirmation shown	Block if dates overlap with existing booking
	Reserve with invalid guest count	Validation error	Guest count must match room capacity
	Reserve with past date	Error – Cannot reserve past	Validate date input
Leave a Review	Submit review after checkout	Review saved and displayed	Error if reservation not yet checked-out
	Submit multiple reviews for same reservation	Error – One review per reservation	Restrict multiple reviews
	Submit review with no rating/comment	Validation error	Rating and comment required
View Reviews	View reviews for accommodation	Reviews list shown	Message shown if no reviews yet
Reply to Review	Admin replies once	Reply saved under the review	Prevent multiple replies per review
	Reply to non-existent review	Error – Review not found	Handle gracefully

2. INTEGRATION TESTING

Component	Test Case	Expected Output	Error Handling
Accommodation ↔ Rooms	Rooms linked to correct accommodation	Displayed under right listing	Error if accommodation ID is invalid
Reservation ↔ Rooms	Room becomes unavailable after booking	Status reflected correctly	Block double-booking
Booking ↔ Reservations	Booking creates reservation record	Accurate linkage and details saved	Error on mismatch or missing data
Reservations ↔ Reviews	Only valid/resolved reservations can leave reviews	Review interface enabled	Prevent if not eligible
Reviews ↔ Admin Reply	Replies attach to specific reviews	Nested correctly under the comment	Error if trying to reply to a non-existent review
Room ↔ Accommodation Delete	Accommodation deletion checks for existing rooms	Prevent deletion	Message with linked data warning

3. SYSTEM TESTING

Scenario	Test Description	Expected Output	Error Handling
Full Admin Flow	Add → Update → List → Remove accommodation	All actions successfully reflect in UI	Restrict removal if linked to rooms/reservations
Full Booking Flow	Search → View rooms → Reserve → Leave review	Booking confirmation, feedback enabled post-stay	Inform if dates are invalid or room is full
Admin Review Management	View all reviews → Reply to specific ones	Replies saved and shown publicly	Prevent duplicate replies
Reservation Status Transition	Accept → Decline → Cancel flow tested on pending reservations	Status updated accordingly	Restrict invalid transitions
Multiple Users Booking	Multiple users search and reserve the same room concurrently	Only one reservation succeeds	Show unavailability to other user

Mobile & Cross-Platform Compatibility	Use Booking features on different devices (Android, iOS, Tablet)	Consistent UI and flow	Test layout responsiveness and interactions
Data Persistence Test	Refresh app after actions like reservation or add room	Data persists	Error if data not stored properly

4. EVALUATION TOOLS – ISO/IEC 25010 Criteria

Quality Characteristic	**Description**	**Performance Indicator**
Functionality	Does the system meet all defined requirements?	100% of core functions implemented and tested
Usability	Is it user-friendly for both admins and users?	Avg. rating ≥ 4.5/5 in usability testing
Reliability	Does it perform consistently under various loads?	99% uptime, < 1 crash per 100 sessions
Performance Efficiency	Are response times acceptable?	< 3s load time, < 2s for search/reservation
Security	Is user and admin data secure?	Auth checks, encrypted sessions, role-based access
Maintainability	Is it easy to debug and improve?	Well-commented code, low bug recurrence rate
Portability	Is it cross-platform compatible?	Fully functional on Android, iOS, tablet views