| Test ID | Objective | Use Case / Feature | Test Case Description | Test Data | Expected Result | Note |
|---------|-----------|--------------------|-----------------------|-----------|-----------------|------|
| TC-001 | Check available classrooms are listed | View Classrooms | Navigate to 'Available Rooms' page | Date=2025-10-10, Time=09:00-11:00 | System displays list of available classrooms | |
| TC-002 | Verify reservation can be made | Add Reservation | Select classroom and confirm booking | Classroom=Room101, Date=2025-10-10, Time=09:00-11:00 | Reservation confirmed, confirmation message displayed | Check for room_id and time slot |
| TC-003 | Check conflict handling when adding reservation | Add Reservation | Try reserving same classroom same time slot | already booked reservation details | System prevents booking and shows 'Room already reserved' error | |
| TC-004 | Allow user to cancel reservation | Cancel Reservation | User cancels existing booking | ReservationID=12345 | Reservation removed and room becomes available | Handle delete unexisting reservation |
| TC-005 | Allow user to edit reservation | Edit Reservation | User modifies reservation to new time slot | ReservationID=12345, NewTime=11:00-13:00 | Reservation updated successfully if no conflict | Check for room_id and time slot |
| TC-006 | Check conflict handling when editing reservation | Edit Reservation | User modifies reservation to a conflicting time slot | already booked reservation details | System prevents update and shows conflict error | |
| TC-007 | Display schedule by week | View Schedule | User views weekly classroom schedule | Week=2025-W42 | System displays classroom reservations for the week | |
| TC-008 | Allow navigation of weekly schedule | View Schedule | User navigates to previous or next week | CurrentWeek=2025-W42, Action=Next | System shows schedule for the next week | Moving next and back |
| TC-009 | Allow filtering schedule by classroom | View Schedule | User filters schedule to show only one classroom | Classroom=Room101, Week=2025-W42 | System displays weekly schedule only for Room101 | Try different inputs |
| TC-010 | Allow filtering schedule by subject | View Schedule | User filters schedule to show only Math reservations | Subject=Math, Week=2025-W42 | System displays weekly schedule only for Math subject | Try different inputs |
| TC-011 | Add new classroom | Manage Classrooms | User adds a new classroom with capacity and equipment | Room=Room301, Capacity=40, Equipment=Projector | Classroom successfully added and listed | |
| TC-012 | Check conflict when adding classroom | Manage Classrooms | Try adding classroom with duplicate name | Exising classroom details | System prevents addition and shows error: 'Classroom already exis | Check both room_id and name |
| TC-013 | Edit classroom details | Manage Classrooms | User edits existing classroom details | Room=Room301, NewCapacity=50 | Classroom details updated successfully | |
| TC-014 | Check conflict when editing classroom | Manage Classrooms | Try editing classroom name to an existing classroom nam | Exising classroom details | System prevents addition and shows error: 'Classroom already exis | Check both room_id and name |
| TC-015 | Delete classroom | Manage Classrooms | User in deletes an existing classroom | Room=Room301 | Classroom deleted and no longer listed | |
| TC-016 | Export usage reports | Export | Generate report for weekly classroom usage | Week=2025-W41 | Report generated and available for download | |