Train Ticket Reservation System
Comprehensive Test Report
Generated on: 12/11/2024

Test Coverage Overview

Test Coverage Breakdown

- Servlets Tested
- Utility Classes Tested
- Service Implementations
- Untested Components

Test Type Distribution and Complexity

- Test Case Complexity

Decision Table Testing
100
90
80
70
60
50
40
30
20
10

Security Testing

Error Handling

Performance Testing

Edge Case Testing
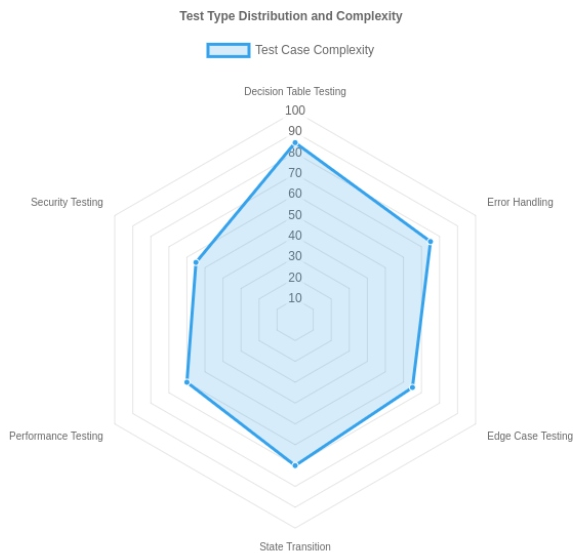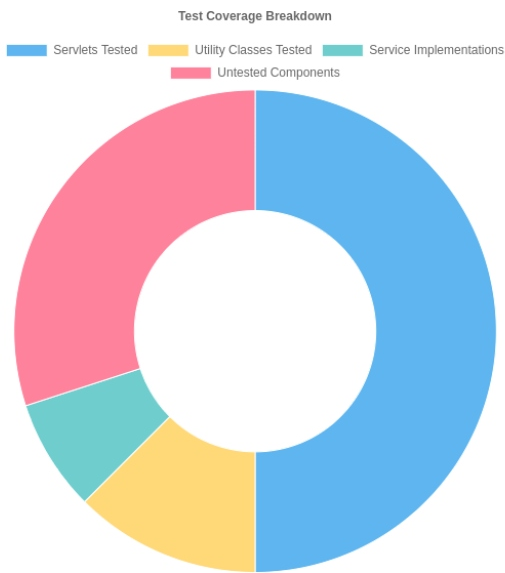
State Transition

Detailed Test Cases

Test Case ID	Module	Initial State	Input/Trigger	Transition Condition	Expected Next State	Actual State
ST001	User Authentication	Not Logged In	Valid Credentials	Successful Authentication	Logged In User Home	
ST002	User Authentication	Logged In	Logout Action	Logout Requested	Login Page	

ST003	Ticket Booking	Train Selected	Seat Selection	Seats Available	Payment Page
ST004	Ticket Booking	Payment Page	Payment Confirmation	Valid Payment	Booking Confirmed
ST005	Ticket Booking	Booking Confirmed	Ticket Cancellation	Within Cancellation Window	Refund Processed
ST006	Admin Train Management	Train List View	Add Train Action	Valid Train Details	Updated Train List
ST007	Admin Train Management	Train List View	Delete Train Action	Train Exists	Updated Train List
ST008	User Profile	Profile View	Edit Profile	Valid Profile Updates	Updated Profile
ST009	User Profile	Profile View	Change Password	Valid Current Password	Password Updated
ST010	Train Search	Initial Search State	Valid Train Number	Train Found	Train Details View
		Initial			Fare

ST011	Fare Enquiry	Enquiry State	Valid Stations	Trains Available	Details View	
ST012	Booking Process	Seat Selection	Insufficient Seats	No Seats Available	Error State	
ST013	User Registration	Registration Form	Complete Registration	Unique Email	User Registered	
ST014	Admin Dashboard	Train Management	Update Train Details	Valid Update	Train Details Updated	
ST015	Booking Modification	Booked Ticket	Modify Booking	Within Modification Window	Booking Modified	
ST016	Waitlist Management	Waitlist Position	Seat Availability	Seat Confirmed	Booking Confirmed	
ST017	Payment Process	Payment Initiated	Payment Failure	Transaction Declined	Payment Error State	
ST018	User Profile	Profile View	Deactivate Account	Confirmation Received	Account Deactivated	
ST019	Train Schedule	Schedule View	Schedule Modification	Admin Authorized	Updated Schedule	

ST020	Refund Process	Ticket Cancelled	Refund Initiated	Refund Approved	Refund Completed	
ST021	User Authentication	Login Attempt	Invalid Credentials	Authentication Failure	Login Error State	
ST022	Ticket Booking	Booking Confirmed	Ticket Modification	Outside Modification Window	Modification Denied	
ST023	User Registration	Registration Form	Duplicate Email	Email Already Exists	Registration Error State	
ST024	Train Availability	Seat Selection	Limited Seats	Partial Seat Availability	Partial Booking State	
ST025	Payment Process	Payment Page	Timeout	Payment Session Expired	Session Expired State	

Test Methodology

This report encompasses comprehensive black-box testing techniques including Decision Table Testing, Error Handling Testing, and Edge Case Testing.