



The structure chart has 3 main modules:-

- 1) Admin module
- 2) Station module
- 3) User module

Admin Module

- * Admin login
- * Manager Train information
 - ↳ Adding train details
 - ↳ Update train schedule
 - ↳ Remove train details

Station Module

- * Master login
- * Display station information
- * Update station details

* Track and rectify

- ↳ Update departure time
- ↳ Update delay
- ↳ Information forwarding

User Module

- * Real-time access
- * Notification system
- * Scheduled access to updates

This gives an overall idea about the structure of the railway system tracking

Now the test suite for the following is designed as follows

I. UNIT TESTING :-

Admin Module tests :-

Admin login test : Ensure that admin login is validated and secure.

Add train test :- Verify if a new train can be added with accurate details

Update train test :- Check if a train schedule can be updated successfully

Delay information test :- Ensure that a delay update is accurately stored.

Station Module Test

Master login test :- Validate login credentials

Train arrival test :- Ensure correct retrieval of scheduled train times

Update train arrival test :- Confirm that station master can update train arrival time

User Module Test :-

View train arrival time :- Correct retrieval of arrival times

Alert retrieval system :- Verify delay alerts.

INTEGRATION TESTING :-

Admin and station module integration :-

- Data Propagation test in train Admin to station
- Train details update test in real-time.

Admin and user module integration :-

- User access to admin update test
- Notification system for users on delay test

Station and user module integration :-

- Test real time arrival updates for users.

SYSTEM TESTING :-

- Test login and Authentication
- Test complete train information flow.

- Test real time delay tracking
- Test system under heavy load.

Example:-

Test Name :- Add train details

Test steps:-

↳ Login as Admin

EXPECTED RESULT

Train details

↳ Enter train details

Saved successfully
and are accessible.

↳ Save details