Software Engineering

SOFTWARE TESTING REPORT

Railway Booking App

—

Overview

This project.

TESTING

Unit Testing

MODELS

All the models are tested to check whether they contain all the correct values.

FORMS

We performed form testing to check all additional validation that is expected to be performed on the fields and any messages that code will generate for errors.

```
module.exports = {
  validateNIC: function (nic) {
    return fetch(config.govAPI + nic)
      .then(handleErrors)
      .then((res) => res.json())
      .then((data) => {
        return data.validated;
      })
      .catch((err) => {
        console.log(err);
      });
  },
```

VIEWS

View unit testing checks whether pages are being rendered correctly or not.

```
JS Home.test.js U X    JS About.test.js U    JS AccountSettings.test.js U    JS Contact.test.js U    JS Footer.test.js U    JS Landing.test.js U    JS Login.test.js U    JS Payment.test.js U

web > src > components > JS Home.test.js > ⊘ compileandRun
  1    import React from "react";
  2    import ReactDOM from "react-dom";
  3    import Home from "./Home";
  4    import AccountSettings from "./AccountSettings";
  5
  6    it("renders without crashing", () => {
  7      const div = document.createElement("div");
  8      ReactDOM.render(<Home />, div);
  9    });
 10
 11    it("renders without crashing", () => {
 12      const div = document.createElement("div");
 13      ReactDOM.render(<AccountSettings />, div);
 14    });
 15    function compileandRun() {
 16      throw new Error("you are using the wrong Enviroment");
 17    }
 18
 19    test("compiling android goes as expected", () => {
 20      expect(() => compileandRun()).toThrow();
 21      expect(() => compileandRun()).toThrow(Error);
 22      expect(() => compileandRun()).toThrow("you are using the wrong Enviroment");
 23      expect(() => compileandRun()).toThrow();
 24    });
 25
```

PAYMENT

We simulated following scenarios:

- Successful payments by card, brand or country
- Card errors due to declines, fraud, or invalid data
- Disputes and refunds

Following is the snippet to test in case of card errors like expired or banned card or invalid data

We used manual and unit testing to check all the possible test cases . We wrote unit testing code for card errors , fraud etc, and manual checking for successful payment by cards.

Manual Testing

Two test accounts were created to test the flow of entire web application

Personal User account

- Three dummy tickets were booked for all the categories
- We checked for all the classes for different dates and it was working fine
- We canceled the tickets successfully.
- After canceling the tickets , tickets were successfully removed from the 'manage booking' page.
- Successfully checked the change PNR services .
- PNRs were changed successfully.

Taking the account through the complete process from signing up to testing every feature ensured that none of the features were breaking in production and that they were all working properly.

We also ran the tests in various devices and resolutions to make sure the UI did not vary incorrectly. This process was repeated with varying the inputs and corner case inputs to check for integrity of the application. We employed various techniques to test input validation, including bug checks.

System Testing

We performed manual System testing on a complete integrated system to evaluate the compliance of the system with all the requirements.

We tested the design and behavior of the system and also the expectations of the customer.

1) **USER REGISTRATION**

TEST CASES	RESULT
Registration with new email id	Registration Successful
Registration with already registered email id	Users already exist!
Registration with wrong email id	Error saying enter valid email id

First name

Last name

Pankaj

kr

Phone

1234567890

NIC

Enter NIC (Optional)

Address

bongora

Email

123@gmail.com

Password

•••

Create account

2) LOGIN

TEST CASES	RESULT
UserLogin with correct email and password	Logged in Successfully !
User Login with wrong email and password	Wrong credentials error !
User Login with correct email and wrong password	Wrong credentials error !

Email

pankaj@gmail.com

Password

••••|

Sign in

Join Now

3) BOOK TICKET

TEST CASES	RESULT
Booking ticket without login	Pop up saying please Login
Booking ticket after login	Book ticket opens
Booking ticket with all valid information as per the required constraints	Booking redirects to payment page successfully
Invalid or missed data while booking ticket	'Please fill all the fields' error !!

Book Train Tickets

From

Dibrugarh

To

Durgapur

Train

02984 Agtl Bnc Special

Class

2nd class

Time

06.00 am

No of Tickets

3

dd-mm-yyyy

Amount	Rs 918.00
Discount	Rs 0.00
Total	Rs 918.00

Make Reservation

4) PAYMENT

TEST CASES	RESULT
Missed data while payment	'Enter all the data' error !!
Making payment withInvalid data	'Entered Data not Valid' error !!
Making payment with all valid information as per the required constraints	Payment Successful !!

Amount	Rs 918.00
Discount	Rs 0.00
Total	Rs 918.00

Select a payment method

O Credit Card

◯ Mobile Number

Card Number	CVC Number	Exp date
card number	CVC	dd/mm

Make Payment

5) MANAGE BOOKING

TEST CASES	RESULT
User wants to Cancel ticket	Pop up showing "All data will be deleted"
Clicking ok on the popup	Cancels the ticket
User wants to change PNR	Pop up showing "Request PNR change"
User fills the required Data	Message sent to the person having that PNR !!

Reference No : 6258fa4386531f2e38eb56d1   PNR No : 377385834

From **New Tinsukia Junction** to **Dibrugarh**   2022-04-14 10.00 am
Train : 02984 Agtl Bnc Special
Class : 2nd class
Quantity : 2

Amount : 40.80   **Total :** Rs 40.80

Change PNR   **Cancel**

Reference No : 6258fc1986531f2e38eb56d5   PNR No : 408624073

From **New Tinsukia Junction** to **Dibrugarh**   2022-04-14 10.00 am
Train : 02984 Agtl Bnc Special
Class : 2nd class
Quantity : 1

Amount : 20.40   **Total :** Rs 20.40

Change PNR   **Cancel**

« 1 »

6) PNR SERVICES

TEST CASES	RESULT
User accepts the change PNR option	PNR changes successfully !!
User accepts the change PNR option	Request deleted from the PNR services page !!

PNR Change Requests

FROM		TO	
Saksham Kr	#408624073	**Pankaj kr**	#140847577
From: New Tinsukia Junction	@ 10.00 am	**From:** New Tinsukia Junction	@ 10.00 am
To: Dibrugarh		**To:** Dibrugarh	
Train: 02984 Agtl Bnc Special	2nd class	**Train:** 02984 Agtl Bnc Special	2nd class
	x1		x2
2022-04-14	₹20.4	2022-04-14	₹40.8

Open message

Accept Reject

After running the above test cases we fixed all detected irregularities between the unit tests that are integrated together. We made sure that none of the features are breaking and the system as a whole is working smoothly in all circumstances .