



IT - 314: Software Engineering

Group - 11

White Box Testing



Event Management and Participation Platform

Prof - Dr. Saurabh Tiwari

Group Mentor - Priyanshu

Group Members :

No	Student Id	Name
1	202201104	Rudraksh Asthana
2	202201105	Rishi Shah
3	202201150	Dhrudeep Sharma
4	202201162	Smit Godhani
5	202201163	Jay Goyani
6	202201165	Parshwa Modi
7	202201167	Het Gandhi
8	202201171	Sahil Chaudhari
9	202201175	Kathan Kadiya

Introduction

This document provides an overview of the unit testing conducted for the project using Jest and earlyAI. It covers both back-end testing and details related to coverage, methodology, and the benefits derived from the testing process.

Tools and Frameworks:

Jest: A JavaScript testing framework designed to ensure the accuracy and dependability of codebases.

White Box Testing :

White-box testing is a software testing approach that involves analyzing the internal structure, design, and implementation of the code. Testers work with access to the source code, focusing on validating the system's logic, flow, and functionality.

Why Unit Testing is Used?

Unit testing is used to ensure that individual components or units of a software application function as intended.

Code Quality Assurance: Unit tests enforce better coding practices, ensuring each component is well-defined and robust.

Improved Documentation: Unit tests serve as documentation by providing clear examples of how each component should behave.

Early Issue Detection: Identifies problems in the initial stages, minimizing their impact on the overall project.

Bugs

During unit testing, we achieved 88.77% code coverage. However, a portion of the code related to OTP verification could not be executed in the tests. As a result, some functions associated with this feature were not fully covered by the tests.

Unit Testing (Overall Coverage) : Backend

All files Controller									
88.77% Statements <small>538/606</small> 86.04% Branches <small>148/172</small> 83.92% Functions <small>47/56</small> 88.88% Lines <small>536/603</small>									
Press <i>n</i> or <i>j</i> to go to the next uncovered block, <i>b</i> , <i>p</i> or <i>k</i> for the previous block.									
Filter: <input type="text"/>									
File ▲		Statements		Branches		Functions		Lines	
authCollege.js	<div><div></div></div>	85.85%	85/99	97.14%	34/35	62.5%	5/8	85.71%	84/98
authCollegeRepProfile.js	<div><div></div></div>	87.17%	34/39	50%	4/8	100%	5/5	87.17%	34/39
authController.js	<div><div></div></div>	81.81%	72/88	95.45%	21/22	62.5%	5/8	81.6%	71/87
authcollegeprofile.js	<div><div></div></div>	86.13%	87/101	77.27%	17/22	77.77%	7/9	87%	87/100
authstudentprofile.js	<div><div></div></div>	93.33%	98/105	86.36%	19/22	100%	8/8	93.33%	98/105
blogcontroller.js	<div><div></div></div>	87.5%	28/32	83.33%	5/6	80%	4/5	87.5%	28/32
eventListing.js	<div><div></div></div>	92.85%	52/56	66.66%	12/18	100%	7/7	92.85%	52/56
homepage.js	<div><div></div></div>	91.66%	11/12	100%	0/0	100%	2/2	91.66%	11/12
regcontroller.js	<div><div></div></div>	94.64%	53/56	88.46%	23/26	100%	3/3	94.64%	53/56
temp.js	<div><div></div></div>	100%	18/18	100%	13/13	100%	1/1	100%	18/18

Thank You