

Project Report

Project Title: Final Year Project Management System

Group 12: Section:B

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Submitted to: Ma'am Javeria Imtiaz

Introduction:

Our project aims to optimize the management process of the final year projects. It serves a variety of stakeholders, such as the Students, FYP Committee Members, Panel Members and the Supervisors. This system allows the users to perform key tasks such as student registration, panel allocation, evaluations, assignment submission and assigning grades.

Project Rational:

The problem of manually managing the FYP management process affected the efficiency and accuracy of the overall management processes which resulted in prolonged time consumption and increased costs due to unnecessary paperwork.

Our project aims to develop a solution that automates the tasks involved in the FYP management. It is designed to reduce the time taken, minimize the paperwork and enhance the overall efficiency.

The app allows such users to create their accounts and avail the different facilities provided. For example, a panel member can do the evaluations of the FYP groups and the student can view the final grade and reviews given by the panel members. To provide the stated functionalities to the users of the FYP management system, we planned to design a web-based application with a 3-tier layered architecture using web technologies like Html, CSS,Bootstrap, and SQL.

Project Architecture:

The FYP Management System has a three-tier layered architecture consisting of a presentation layer, business layer, and database layer.

The presentation layer, implemented using HTML, CSS and Bootstrap provides the user interface for interaction. The user interface is designed to be user-friendly and responsive. The business layer contains the core logic and functionalities of the system. This layer handles user authentication, data validation, business rules implementation, and other functional requirements of the system. The Database layer is to store data in the database and has been implemented using SQL.

The reason for choosing the three-tier architecture is because it separates different aspects of the system, making development and maintainability easier. The code organization is consistent which simplifies making changes in all or some of the objects.

Product Backlog

ID	User Story	Estimate	Priority	Acceptance Criteria
1	As an FYP committee member, I want to create the user accounts for students, supervisors and panel members of the FYP, so that I'm able to manage and control access to the system.	5	1	 Username and passwords for all the users are set for their account and stored in the database. The users can successfully log in to the FYP system
2	As an FYP committee member, I want to give roles	1	2	Given that the FYP committee member is logged in and can access list of users when FYP committee member selects a particular user and assigns them

	to the users such as Student, Panel Member and Supervisor, so I assign and give the correct required permissions.			to a specific role then system updates the role of selected user and message of successful role assignment is displayed
7	As an FYP committee member, I want to create project panels composed of faculty members, so that I can ensure there is a diverse yet balanced team that will evaluate fairly.	2	3	Given FYP committee member is logged in and accesses faculty members list when FYP committee member clicks on the 'Create Panel' button and adds faculty members to the created panel then system creates new project panel with the added faculty members and display the panel details and members
8	As an FYP committee member, I want to allocate FYP groups to the created project panels, so that there is a smooth streamlined process of evaluating the projects.	2	4	Given FYP committee member is logged in and accesses FYP groups and project panels lists when FYP committee member selects an FYP group and assigns assigns it to a particular project panel then system updates FYP group list to show its assigned project panel and show the panel on FYP group page
18	As a panel member, I want to view the FYPs assigned to the panel so that I know which projects to evaluate	2	5	Given Panel member has logged in when panel member selects the 'Assigned Projects' section then the system displays all the FYPs assigned to the panel of which this panel member is a part
12	As a student, I want to view the panel	2	6	Given Student has enrolled for FYP when student logs in then the system should display the panel

	assigned to my FYP project so that I am aware of the assessment process			assigned to the student to keep track of the assessment process
11	As a student, I want to view my group members, project title/description and the supervisor so that I can gain clarity on the details of the project	3.5	7	Given Student has enrolled for FYP and have logged in when student selects 'Project Details' then the system should display the project details, including the group members, supervisor and the project title/description
21	As a supervisor, I want to view a list of all active FYPs that I am currently supervising so that I can better manage my workload and student groups.	2.5	8	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to view all the currently active FYPs they are supervising then The system should display a list of all the FYPs under this supervisor
22	As a supervisor, I want to see the details of each FYP I am supervising, including project and group information, so I can guide them properly.	2	9	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to view details of each FYP project they are supervising thenThe system should display a list of all active FYPs under the supervision of that supervisor and Let the supervisor access the project information of each FYP and Let the supervisor access the group information of each FYP
27	As a supervisor, I want to be able to communicate quickly with my student	4	10	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to communicate with a student group then The system should allow the

	groups directly, so that I can answer any issues they may have.			supervisor to view any queries made by students and Let the supervisor respond to them and Send the responses to the student group
6	As an FYP committee member, I want to be able to set deadlines for the projects, for both submission and evaluation, so that I can ensure on time submissions and have a project timeline.	3.5	11	Given that the FYP committee member is logged in and accesses FYPs list when FYP committee member selects an FYP and enters submission and evaluation deadlines then system saves the entered deadlines for that FYP and displays the deadlines
14	As a student, I want to view the deadlines of the presentations and document submissions so that I can make submissions within the given time	1	12	Given Student has enrolled for the FYP and have logged in when the student selects the 'Assignments' section then the system displays the deadlines for the work assigned
16	As a student, I want to submit the soft copies of the documents and presentations so that the need for unnecessary paperwork is minimized	6	13	Given Student has enrolled for the FYP and have logged in when student selects the 'Assignments' section then the system allows the student to submit the soft copies of the assignment
25	As a supervisor, I want to be able to	1	14	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group

	see the deadlines for all FYP-related assessments (submissions, presentations, etc.) so that I can schedule my time effectively and remind my students of deadlines.			when The Supervisor wants to view deadlines of each FYP project they are supervising then The system should display a list of all active FYPs and their respective deadlines and Let the supervisor see what assessment material the deadline is associated with
17	As a student, I want to submit a progress report on my FYP so that I can provide an update on the status of the project	4	15	Given Student has enrolled for the FYP and have logged in when the student selects 'Report' section then the system redirects to another page and allows the student to submit the progress report of the project
28	As a supervisor, I want to submit requests for extra materials for FYP projects that I am supervising so that I have relevant material to aid my students.	2.5	16	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to request for extra helping material for a particular FYP project then The system should send this request to the panel members and Let the panel members respond to this request and Notify the supervisor once their request is responded to
29	As a supervisor, I want to upload supplementary documents for students, so that I may make sure students have what they need to be successful.	4	17	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to upload supplementary documents for a student group then The system should allow the supervisor to upload the relevant feedback and Let the students view them

23	As a supervisor, I want to review the progress reports that my student groups submit, so that I can monitor their progress.	3	18	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to view progress reports submitted by students then The system should list the project reports submitted by the relevant student group and Allow the supervisor to view these reports
5	As an FYP committee member, I want to be able to create reports for the project, including missing evaluations, list of FYPs supervised by faculty, and grades report, so I can assess progress and identify possible issues.	3	19	Given that the FYP committee member is logged in when the member clicks the 'Reports' button and selects report type e.g. missing evaluations then system generates report according to the selected type and allows member to download the report
3	As an FYP committee member, I want to receive notifications whenever a project supervisor has reached their maximum project limit of 6 FYPs, so I can give the extra projects to some other Supervisor having less workload.	2	20	Given a supervisor has reached maximum limit of 6 FYPs assigned when FYP committee member attempts to assign a project to that supervisor then the system shows notification about the supervisor having reached the maximum number of FYPs assigned and prevents further assignment of FYPs to that supervisor
9	As an FYP committee member, I	2	21	Given FYP committee member is logged in when FYP committee member clicks on 'Students' button

	want to be able to see lists of all registered students in the FYP1, so that I can manage the allocation of projects accordingly.			then system displays all registered students with their information
32	As a supervisor, I want to be able to offer suggestions to the FYP Panel Members on various areas of the FYP program, so that I can contribute to the overall improvement.	3	22	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to offer suggestions on various project aspects then The system should send these suggestions to the panel members and Let the panel members view and respond to these suggestions
19	As a panel member, I want to fill out the evaluation form so that I can participate in the assessment process.	4	23	Given Panel member has logged in when the panel member selects a specific FYP for evaluation then the system redirects the member to an evaluation form
13	As a student, I want to view reviews and suggestions from the panel members so that I can improve the quality of my work	2	24	Given Student has enrolled for the FYP and have logged in when the student selects the 'Reviews' section then the system displays the reviews and suggestions related to the project from the panel members

20	As a panel member, I want to receive notifications for missing evaluation forms so that I can complete the pending evaluations	1.5	25	Given Panel member has logged in and have received a notification for missing form when the panel member clicks on the notification then the system redirects the member to the evaluation form of the project that has not been evaluated yet
24	As a supervisor, I want to be able to access FYP materials (proposals, final reports etc) submitted by my student groups so that I can examine them.	2	26	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to view materials submitted by students of each FYP project they are supervising then The system should let the supervisor access the various material each student group has submitted
10	As an FYP committee member, I want to view the specific details of the FYP groups, members, the assigned supervisor etc., so that I can have information on each FYP as well as the group dynamics.	2	27	Given FYP committee member is logged in and accesses FYP groups list when FYP committee member selects an FYP group then system displays Group Members and their information and display the assigned supervisor and their details and display project information including title and description
30	As a supervisor, I want to see the evaluation forms and grades submitted by	2	28	Given That the Supervisor is logged in and That the Supervisor is assigned to an FYP Student Group when The Supervisor wants to view the evaluation forms and grades submitted by panel members for

Project Planner

Sprint 1: Initial Setup

User Story	Description	Assigned To	Status	Start Date	End Date
1	Create user accounts	Fahad Alam	Done	12-04-24	12-04-24

2	Assign User roles	Fahad Alam	Done	13-04-24	13-04-24
7	Create Project Panels	Fahad Alam	Done	13-04-24	13-04-24
8	Assign FYP groups to Panels	Fahad Alam	Done	14-04-24	14-04-24
18	Access Assigned FYPs	Hania Zahid	Done	16-04-24	16-04-24
12	View Assigned Panel	Hania Zahid	Done	16-04-24	16-04-24
11	View Project Details	Hania Zahid	Done	16-04-24	16-04-24
21	View all active FYPs	Fatima Imran	Done	16-04-24	16-04-24
22	View details of each FYP	Fatima Imran	Done	16-04-24	16-04-24
27	Communicate with Assigned Groups	Fatima Imran	Done	17-04-24	17-04-24

Sprint 2: Submission and Reports

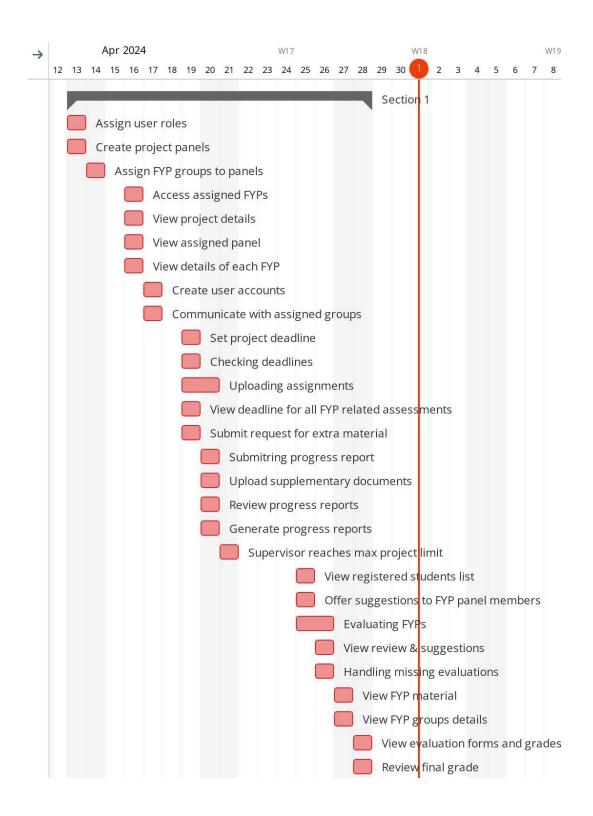
User Story	Description	Assigned To	Status	Start Date	End Date
6	Set project deadline	Fahad Alam	Done	19-04-24	19-04-24
14	Checking deadlines	Hania Zahid	Done	19-04-24	19-04-24
16	Uploading assignments/deliverables	Hania Zahid	Done	19-04-24	20-04-24
25	View Deadline for all the FYP related assessments	Fatima Imran	Done	19-04-24	19-04-24
17	Submitting progress report	Hania Zahid	Done	20-04-24	20-04-24
28	Submit Request for Extra Material	Fatima Imran	Done	19-04-24	19-04-24
29	Upload Supplementary Documents	Fatima Imran	Done	20-04-24	20-04-24

23	Review Progress Reports	Fatima Imran	Done	20-04-24	20-04-24
5	Generate project reports	Fahad Alam	Done	20-04-24	20-04-24
3	Supervisor reaches max project allocation limit	Fahad Alam	Done	21-04-24	21-04-24

Sprint 3: Enhanced Functionality

User Story	Description	Assigned To	Status	Start Date	End Date
9	View Registered Students list	Fahad Alam	Done	25-04-24	25-04-24
32	Offer Suggestions to FYP Panel Members	Fatima Imran	Done	25-04-24	25-04-24
19	Evaluating FYPs	Hania Zahid	Done	25-04-24	26-04-24
13	View Review & Suggestions	Hania Zahid	Done	26-04-24	26-04-24
20	Handling Missing Evaluations	Hania Zahid	Done	26-04-24	26-04-24
24	View FYP Material	Fatima Imran	Done	27-04-24	27-04-24
10	View FYP group's details	Fahad Alam	Done	27-04-24	27-04-24
30	View Evaluation Forms and Grades	Fatima Imran	Done	28-04-24	28-04-24
15	Review final grade	Hania Zahid	Done	28-04-24	28-04-24

Gantt Chart

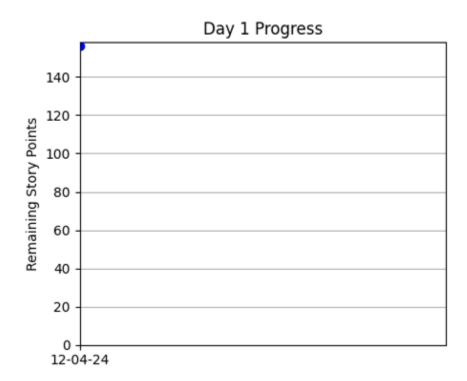


Sprint Burn Down Charts:

Sprint 1:

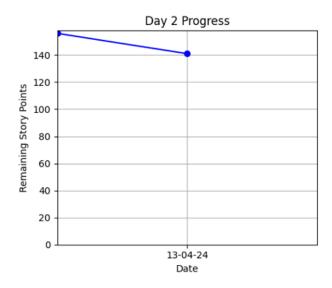
Day 1 Progress

Date	Remaining Story Points
12-04-24	156



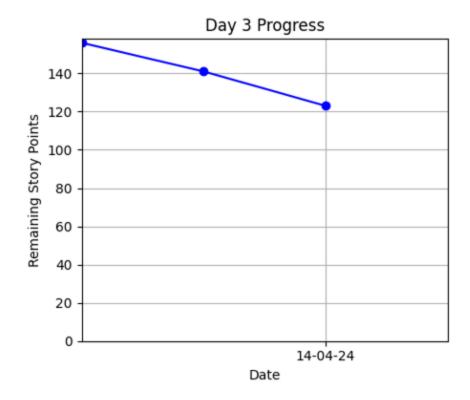
Day 2 Progress

Date	Remaining Story Points
12-04-24	156
13-04-24	141



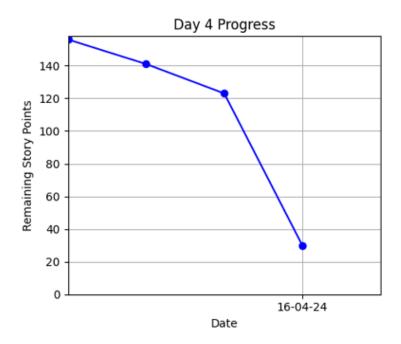
Day 3 Progress

Date	Remaining Story Points
12-04-24	156
13-04-24	141
14-04-24	123



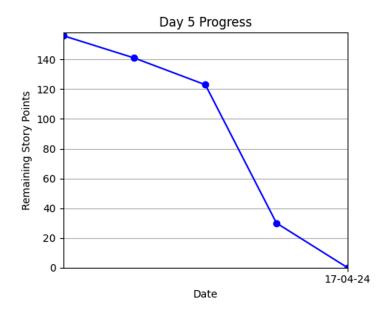
Day 4 Progress

Date	Remaining Story Points
12-04-24	156
13-04-24	141
14-04-24	123
16-04-24	30



Day 5 Progress

Date	Remaining Story Points
12-04-24	156
13-04-24	141
14-04-24	123
16-04-24	30
17-04-24	0



Sprint 2: Table for Day 1 (19th April)

Date	Remaining Story Points
19-04-24	90

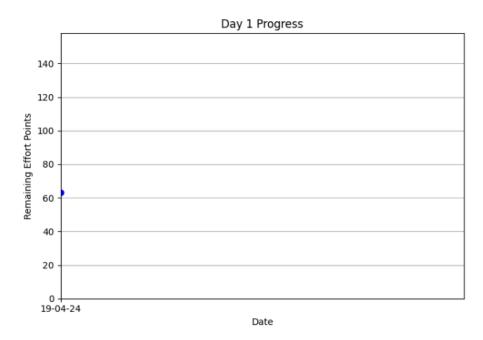


Table for Day 2 (20th April)

Date	Remaining Story Points
19-04-24	90
20-04-24	75



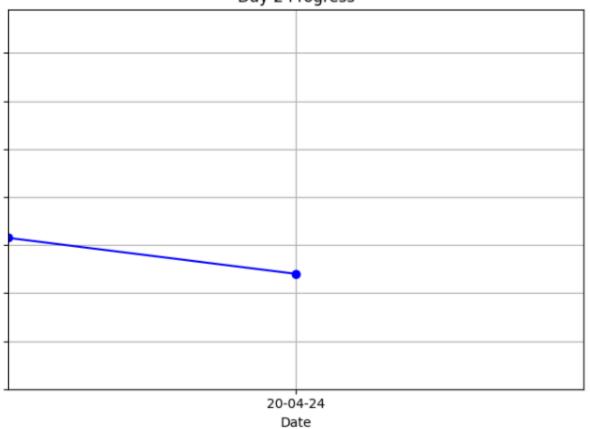
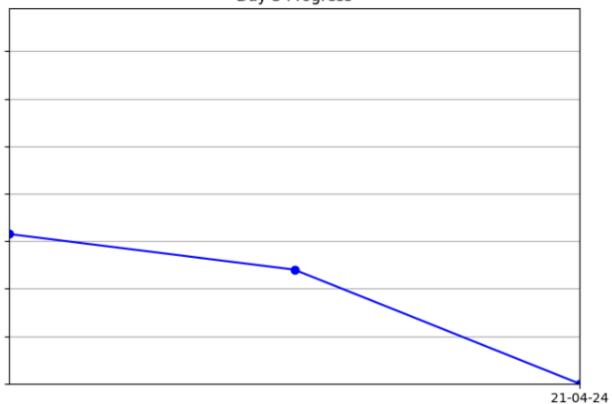


Table for Day 3 (21st April)

Date	Remaining Story Points

19-04-24	90
20-04-24	75
21-04-24	27

Day 3 Progress



Date

Sprint 3:

Table for Day 1 (25th April)

Date	Remaining Story Points
25-04-24	120

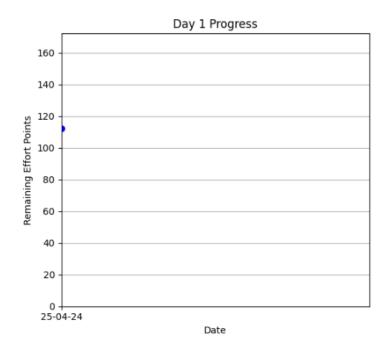


Table for Day 2 (26th April)

Date	Remaining Story Points
25-04-24	120
26-04-24	87

Day 2 Progress

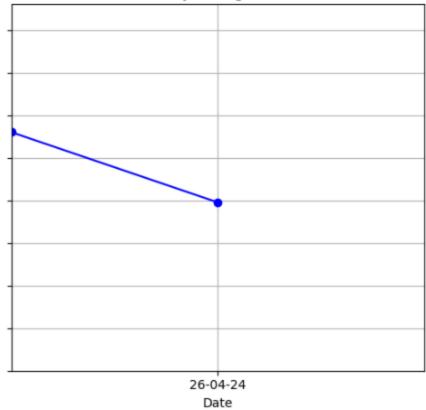


Table for Day 3 (27th April)

Date	Remaining Story Points
25-04-24	120
26-04-24	87
27-04-24	53



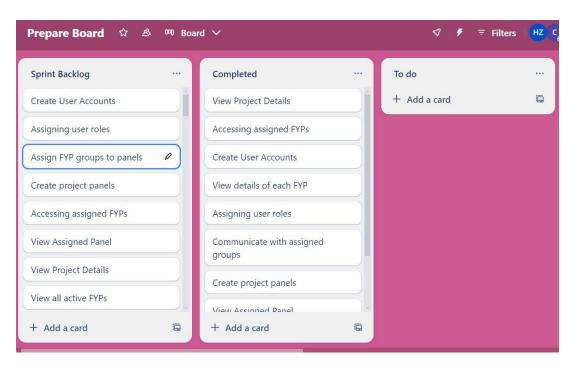
Table for Day 4 (28th April)

Date	Remaining Story Points	
25-04-24	120	
26-04-24	87	
27-04-24	53	
28-04-24	8	

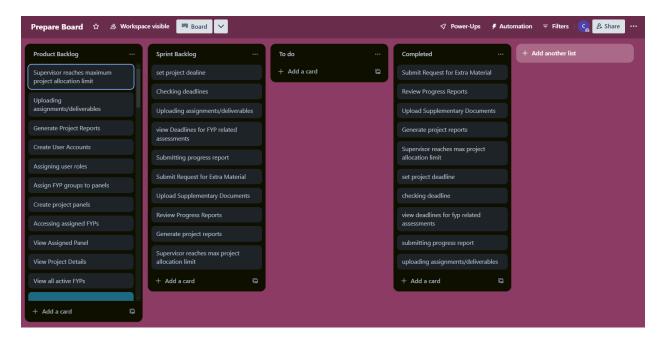


Trello Board Screenshots

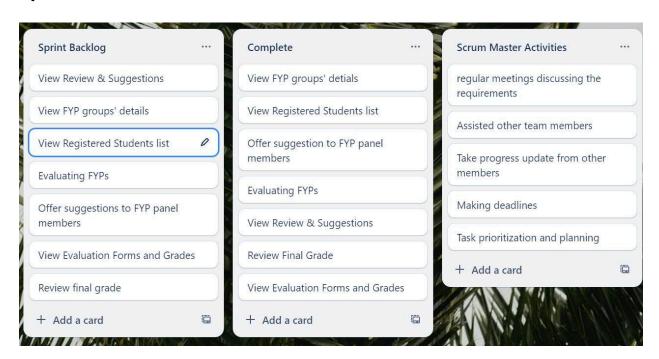
Sprint 1



Sprint 2



Sprint 3



Equivalent Class Partitioning and Boundary Values:

User Story: Evaluating FYPs

Fields:

Project ID(dropdown menu)

· Comment (text input)

Score (radio buttons)

Equivalent Class Partitions

Field	Valid Classes	Invalid Classes
Project ID	All projects assigned to the specific panel member	Projects not assigned to the panel member
Comment	Text (not greater than 50 characters)	Text greater than 50 characters
Score	Only 1 button selected from each row	More than 1 button selected from the row

Boundary Values:

Field	Boundary Values	
	Valid	Invalid
Comment	0,1,25,49, 50	51

Number of Test Cases:

Weak Equivalence: 3

Strong Equivalence: 6

User Story: Uploading Assignment/Progress Report

Fields:

· Choose File (search box)

· Upload File (button)

Equivalent Class Partitions

Field	Valid Classes	Invalid Classes
Choose File	Path of the file present in the same directory	Empty string, special characters, files not in the same directory
Upload	Correct path, all file formats	Incorrect file path, empty string

Boundary Values:

Field	Boundary Values	
	Valid	Invalid
Choose File	Correct path	Special characters

Number of Test Cases:

Weak Equivalence: 2

Strong Equivalence: 4

User Story: Create User Accounts

Field	Valid Classes	Invalid Classes
username	Alphanumeric, unique usernames	Empty, non-unique, or special characters
password_hash	Properly hashed passwords	Empty or poorly hashed strings
role	Student, Supervisor, Panel Member	Undefined or empty roles
first_name	Alphabetic names	Empty or special characters only
last_name	Alphabetic names	Empty or special characters only

Boundary Values:

Field	Valid Boundary	Invalid Boundary
username	Unique usernames	Non-unique usernames
password_hash	Properly hashed	Empty or improperly hashed
role	Defined roles	Undefined roles
first_name	Non-empty strings	Empty strings or numbers
last_name	Non-empty strings	Empty strings or numbers

Test Case Counts

Weak Equivalence Testing: 1

• Strong Equivalence Testing: 2

User Story: Create Project Panels

Field	Valid Classes	Invalid Classes
panel_name	Non-empty, alphanumeric strings	Empty or non-alphanumeric
panel_leader_id	Existing user IDs	Non-existing, invalid, or empty

Boundary Values

Field	Valid Boundary	Invalid Boundary
panel_name	Non-empty strings	Empty strings
panel_leader_id	Existing user IDs	Non-existing user IDs

Test Case Counts

• Weak Equivalence Testing: 1

• Strong Equivalence Testing: 2

User Story: Assign FYP Groups to Panels

Field	Valid Classes	Invalid Classes
group_id	Existing group IDs	Non-existing, invalid, or empty
panel_id	Existing panel IDs	Non-existing, invalid, or empty

Boundary Values

Field	Valid Boundary	Invalid Boundary
group_id	Existing group IDs	Non-existing group IDs
panel_id	Existing panel IDs	Non-existing panel IDs

Test Case Counts

Weak Equivalence Testing: 1Strong Equivalence Testing: 2

User Story: Create Reports

Field	Valid Classes	Invalid Classes	
report_type	Non-empty, valid report types	Empty or undefined report types	
generated_by	Existing user IDs	Non-existing, invalid, or empty	
created_at	Proper datetime values	Invalid, empty, or malformed	

Boundary Values

Field	Valid Boundary	Invalid Boundary	
report_type	Defined report types	Undefined report types	
generated_by	Existing user IDs	Non-existing user IDs	
created_at	Valid datetime values	Malformed or empty	

Test Case Counts

Weak Equivalence Testing: 1Strong Equivalence Testing: 2

User Story: Set Project Deadlines

Field	Valid Classes	Invalid Classes	
project_id	Existing project IDs	Non-existing, invalid, or empty	
submission_deadline	Proper datetime format	Invalid or empty datetime	
evaluation_deadline	Proper datetime format	Invalid or empty datetime	

Boundary Values

Field	Valid Boundary	Invalid Boundary	
project_id	Existing project IDs	Non-existing project IDs	

submission_deadline	Valid datetime values	Malformed or empty	
evaluation_deadline	Valid datetime values	Malformed or empty	

Test Case Counts

Weak Equivalence Testing: 1Strong Equivalence Testing: 2

User Story: Upload Supplementary Documents

Field	Valid Classes	Invalid Classes	
Assigned Student Group	Existing group	Non-existing group, empty	
Supervisor Login Status	True	False	
Supplementary Document	Valid file format	Invalid file format, empty	

Boundary Values:

Field	Valid Boundary	Invalid Boundary	
Assigned Student Group	Unique existent group	Non-existing group, empty	
Supplementary Document	PDF	JPEG,PNG,HTML etc	

Test Case Counts

• Weak Equivalence Testing: 2

• Strong Equivalence Testing: 6

User Story: Communicate With Assigned Student Groups

Field	d Valid Classes Invalid Classes		
Assigned Student Group	Existing group	Non-existing group, empty	
Supervisor Login Status True		False	
Supervisor Responses	Non-empty text	Empty	

Boundary Values:

Field	Valid Boundary Invalid Boundary	
Assigned Student Group Unique existent group Non-existing group, em		Non-existing group, empty
Supervisor Responses	Maximum character limit	Empty, above or below limit

Test Case Counts

• Weak Equivalence Testing: 1

• Strong Equivalence Testing: 3

GUI of the Project:

FYP Committee Member Interface

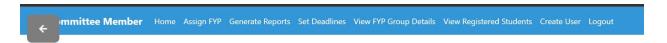
Home Page



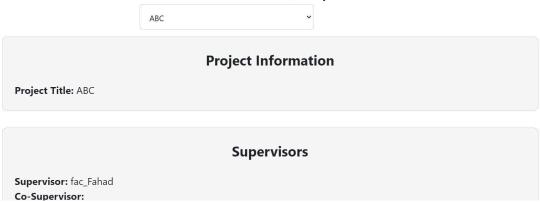
FYP Manager Home



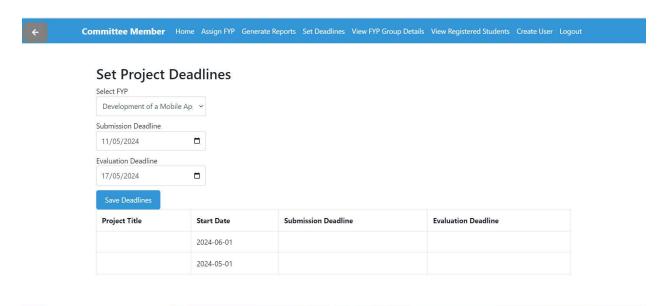
View FYP Group Details



Select FYP Group



Set Project Deadline



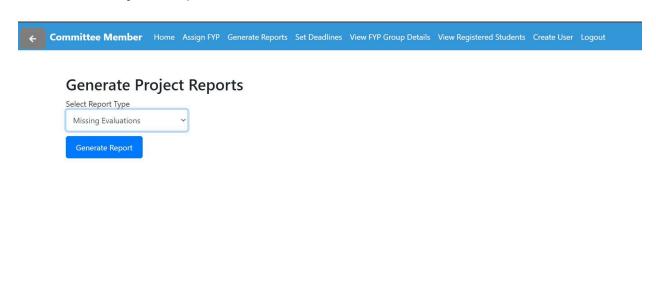
View the Registered Students



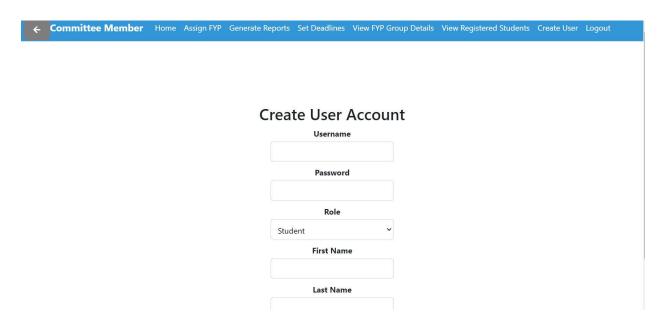
Registered Students List

User ID	Username	First Name	Last Name	Group Number
2	21i0381	Shaiza	Rashid	1
3	21i2598	Fatima	Imran	2

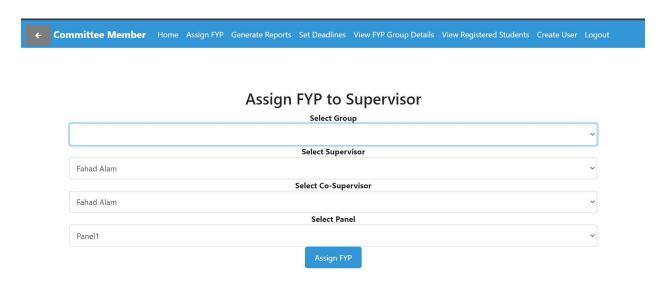
Generate Project Reports



Create and Assign User Roles

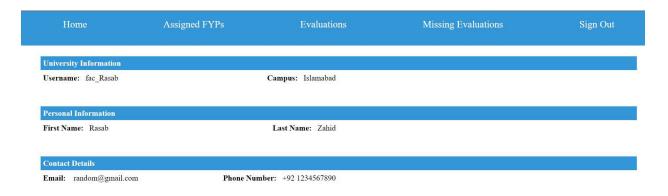


Assign FYP to Supervisor



Panel Member Interface

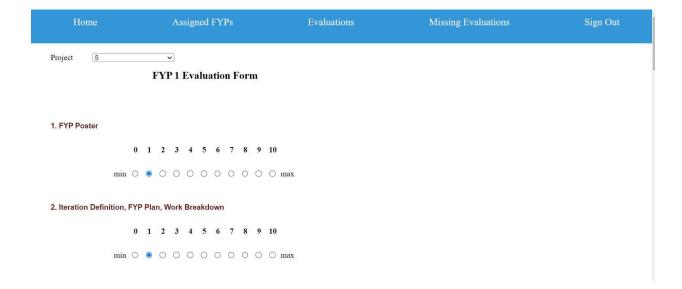
Home



View Assigned Projects



Evaluation Form



View Missing Evaluations

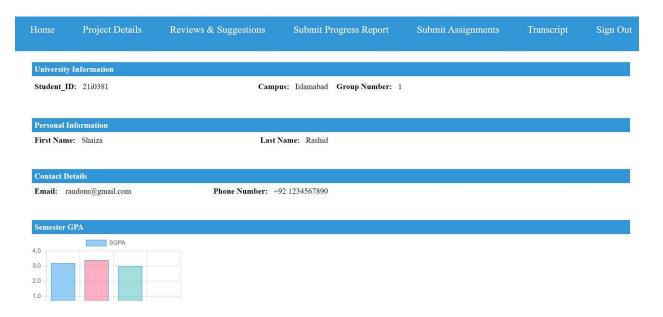


Student Interface

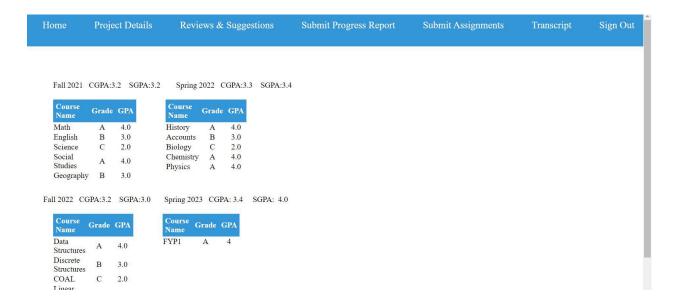
Login



Home



View Final Grade



View Project Details/ Assigned Panel



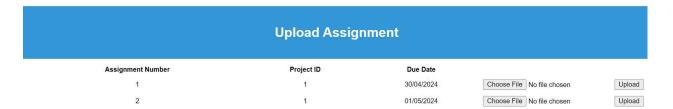
View Review/Suggestions given



Submit Progress Report

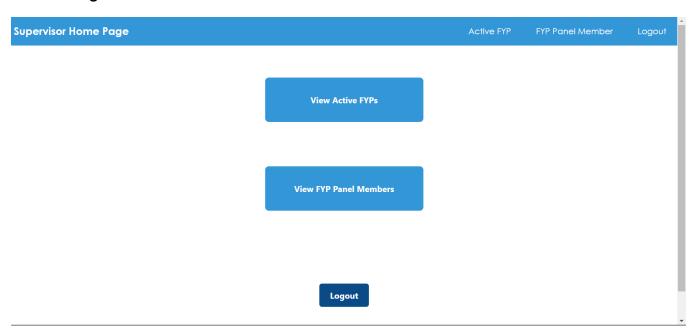


Upload Assignments

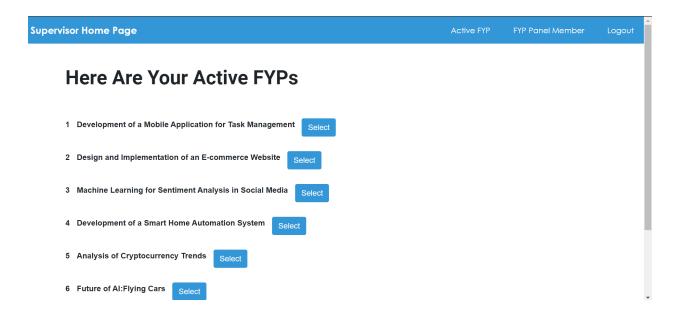


Supervisor Interface

Home Page



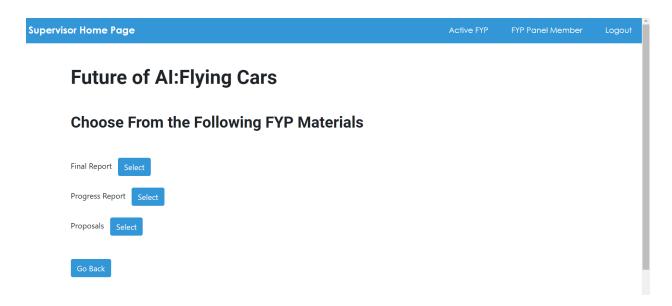
View Active FYPs



Active FYP Menu



FYP Materials



Final Report



Proposals



Progress Report

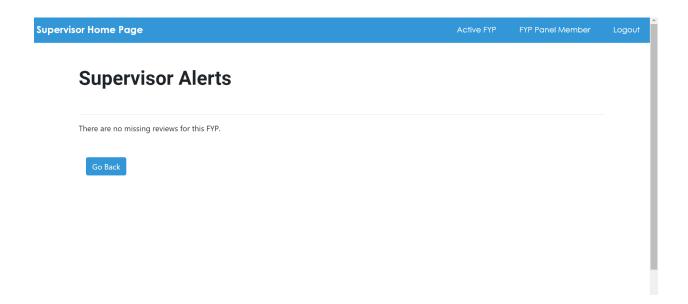
Progress Report: Development of a Mobile Application for Task Management

Report Date: Monday, April 1, 2024

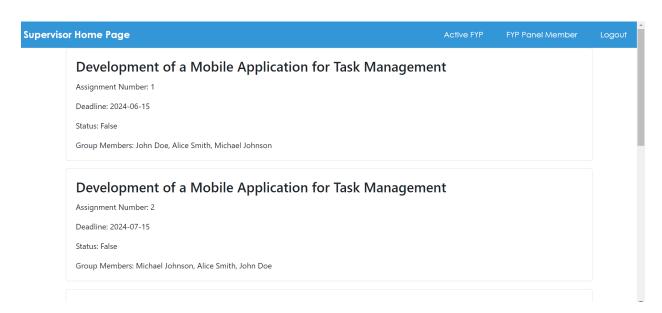
Report Content:
This is the progress report for FYP ID 1.
Group Members: John Doe, Alice Smith, Michael Johnson

Back to FYP Materials

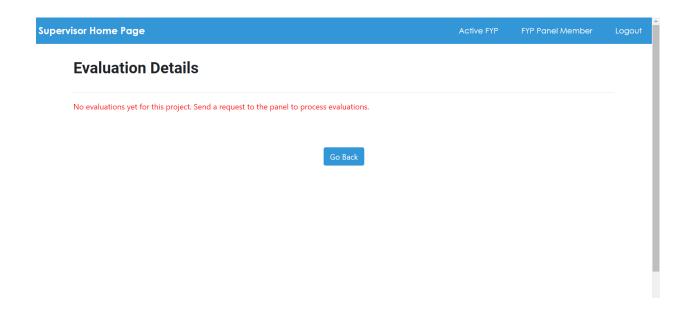
Alerts



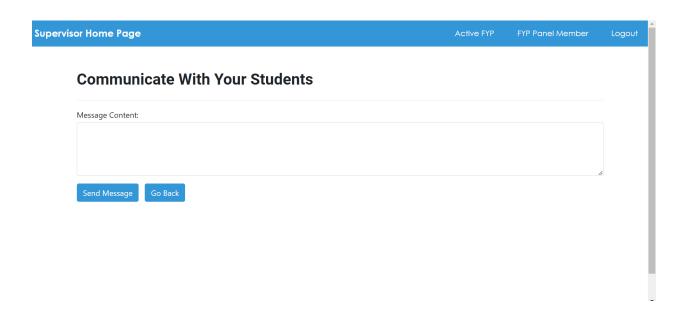
Deadlines



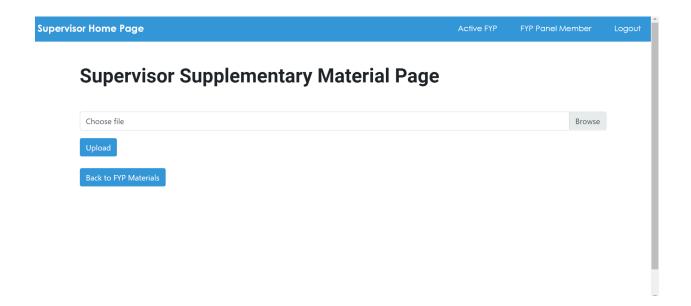
Evaluation Details



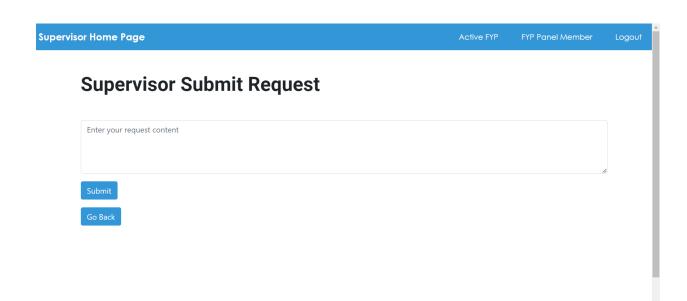
Communicate with Students



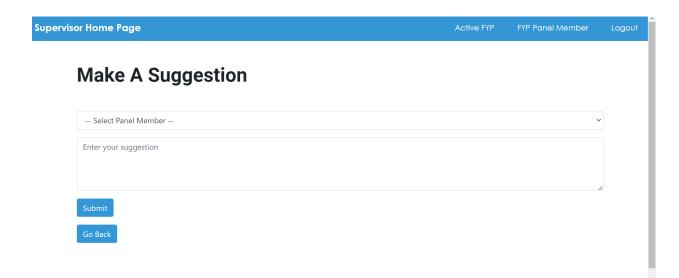
Supplementary Material



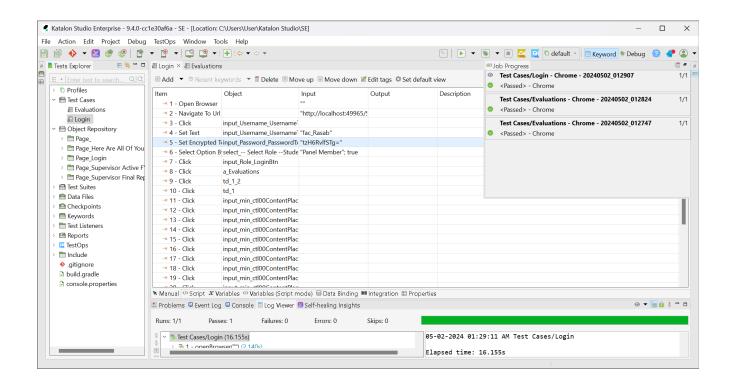
Submit Request

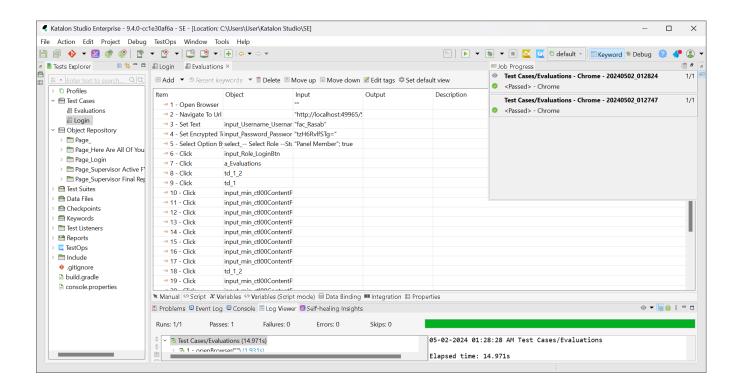


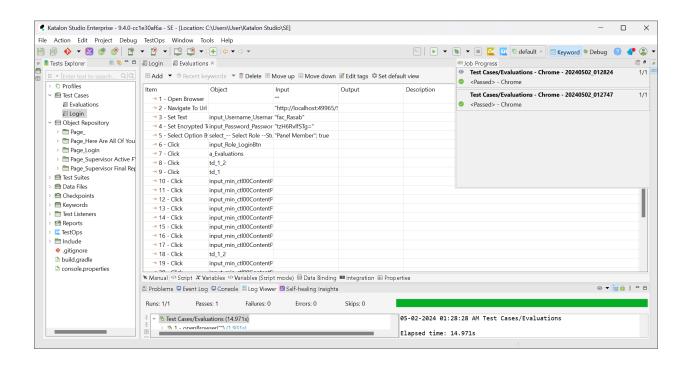
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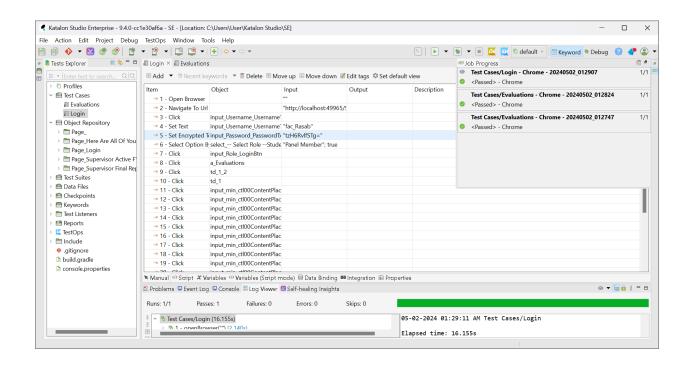


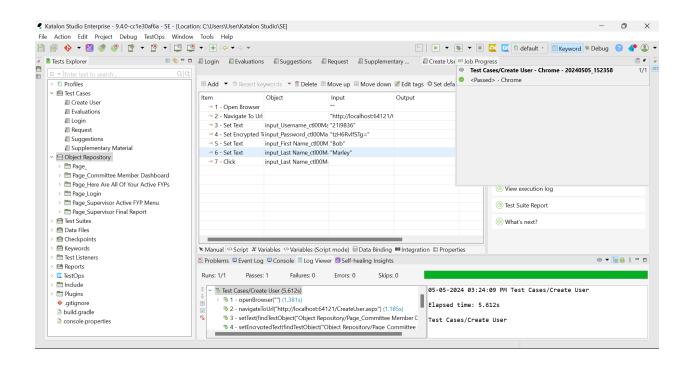
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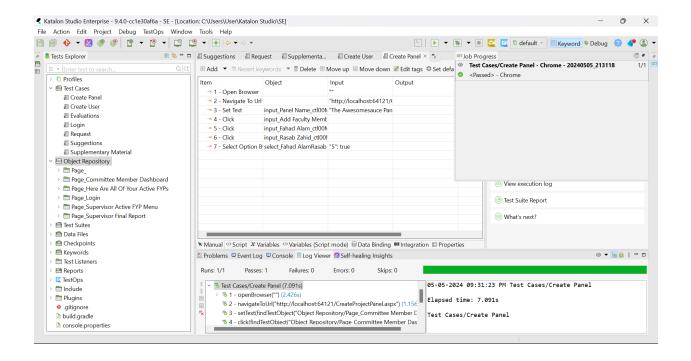


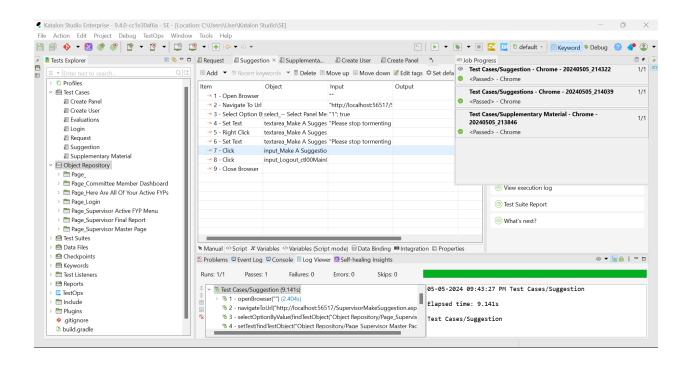


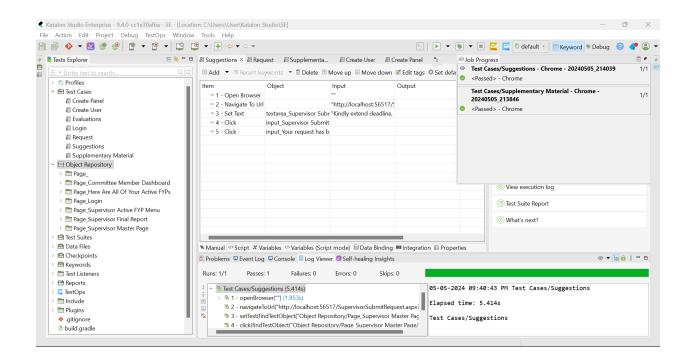


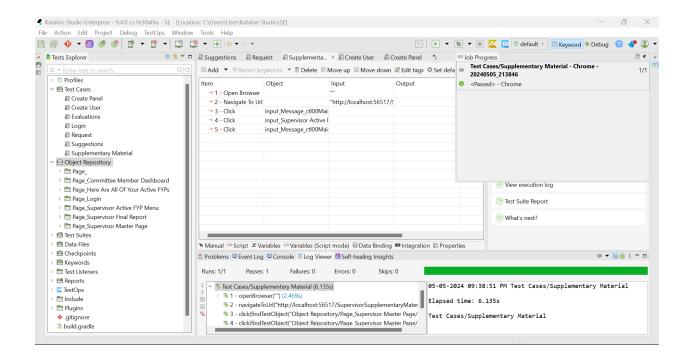












Product Review:

- The user interface can be improved by refining the layout and adding modern design elements
- The architecture can be changed to the one having more number of layers in order to increase the security
- We can ensure that the system is compatible with mobile devices as well for user convenience