LITHAN

Plan, Schedule, Test Community Portal

Module Project

Module: NICF Capstone Project using Java

Course: NICF Advanced Certificate in Software & Applications (Development & Deployment)

Start Date	:	**16 Jun 2022**
End Date	:	**14 Jul 2022**
Submission Date	:	**14 Jul 2022**

Learner Name	:	**WeeChong, Teo**
Enrollment ID	:	
Presentation Date	:	**15 Jul 2022**

Document History

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Version Number	Effective Date of release	Summary of Included Changes	Author
1	4th March 2016	First Edition	Satya CVS
2	23rd Jul 2018	Changed for Module 6	Shrinivas K R

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1. Different Types of Testing

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Functional Testing	Non-functional Testing
It verifies the operations and actions of an application.	It verifies the behavior of an application.
It is based on requirements of customer.	It is based on expectations of customer.
It helps to enhance the behavior of the application.	It helps to improve the performance of the application.
Functional testing is easy to execute manually.	It is hard to execute non-functional testing manually.
It tests what the product does.	It describes how the product does.
Functional testing is based on the business requirement.	Non-functional testing is based on the performance requirement.

1. Different Types of Testing

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Functional Testing Types	Non-functional Testing Types
Unit testing	Performance Testing
Integration testing	Load testing
System testing	Stress testing
Sanity testing	Volume testing
Smoke testing	Security testing
Interface testing	Compatibility testing
Regression testing	Install testing
Beta/Acceptance testing	Recovery testing
	Reliability testing
	Usability testing
	Compliance testing
	Localization testing

2. How Different Test Helps

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- Unit Testing
  - Perform during development to check individual unit works properly
  - Find problem early in development lifecycle so reduce later cost of testing
- Integration Testing
  - Test the connectivity or data transfer between unit tested modules
  - Verify the functional and non-functional behaviors of the interfaces are as designed and specified
  - To find defects which may be in the interaction or within the components or systems
- User Acceptance Testing
  - Last phase of testing to validate the end-to-end business flow meeting the functional requirements
  - All critical defects must be fixed before signed off can be done
  - Ensure final product is ready for release

2. How Different Test Helps

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- Stress Testing
  - This a non-functional test to test the stability & reliability of the system in order to determines the system robustness and error handling in heavy load conditions.
  - Objective is to avoids system crash during extreme situations in the production environment.
- Load Testing
  - Non-functional test to determine a systems performance under real-life load conditions.
  - It will provide application behavior when multiple users access it concurrently with the infrastructure resources.
- Compatibility Testing
  - Compatibility testing is to check whether the software is capable of running on different device, platform, operating systems etc.
  - To ensure good user experience

3. Tests Selected

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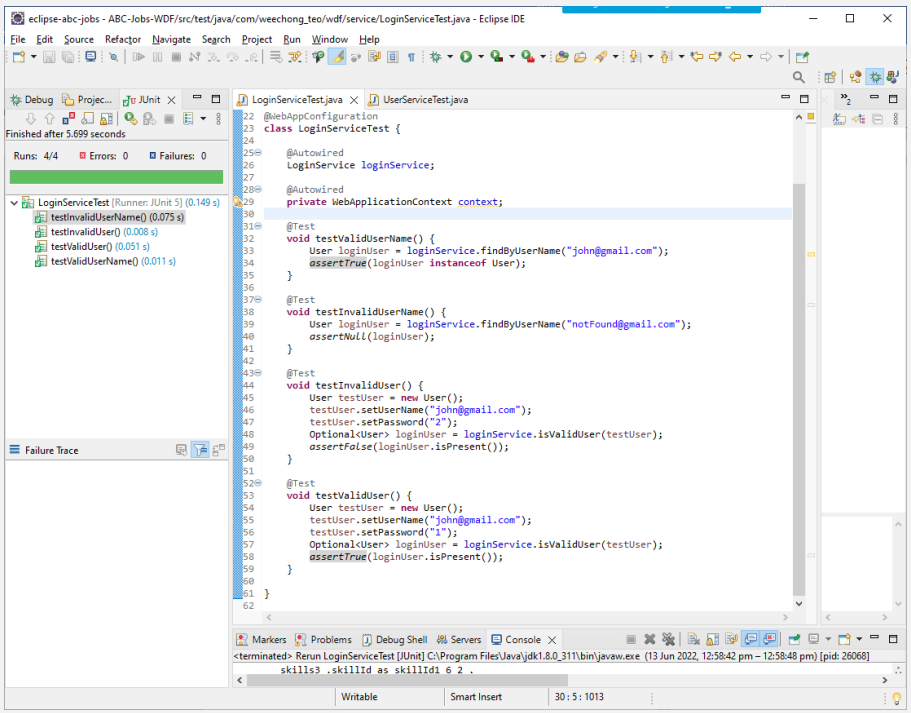
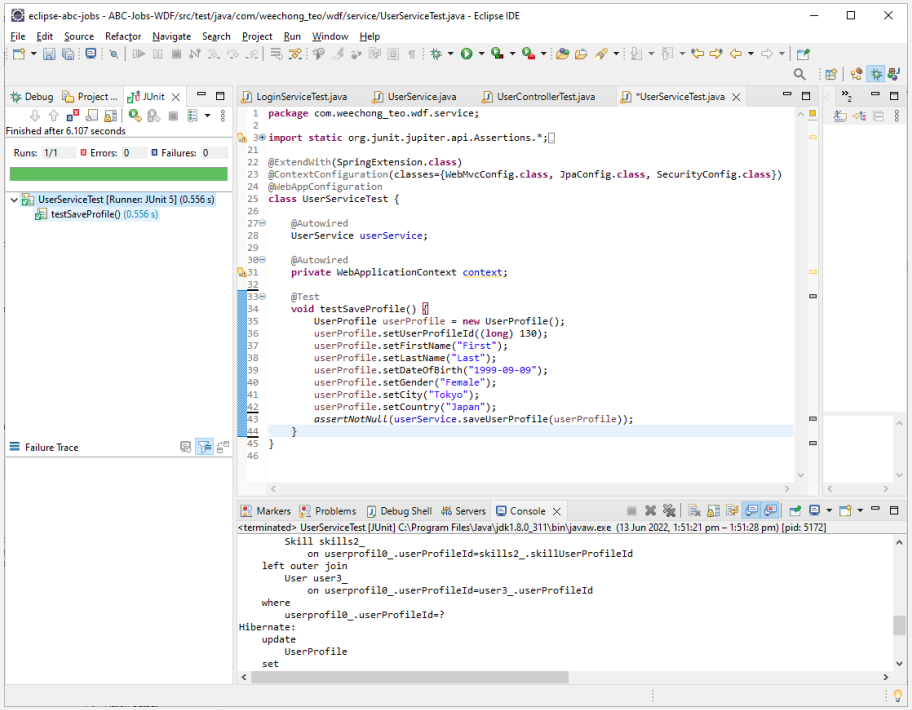
- Unit Testing
  - Junit5 to perform the test in Eclipse IDE
  - To check individual unit works properly
  - Find problem early in development lifecycle





3. Tests Selected

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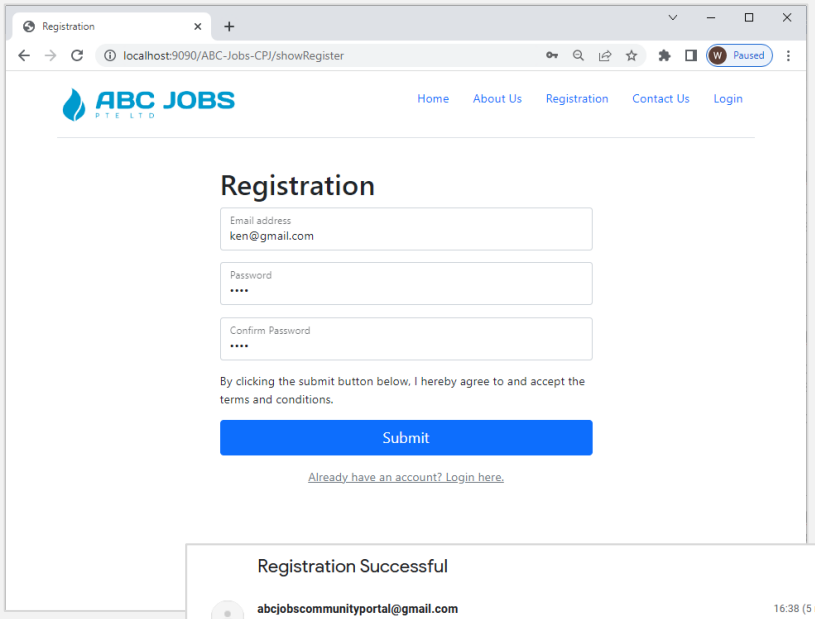
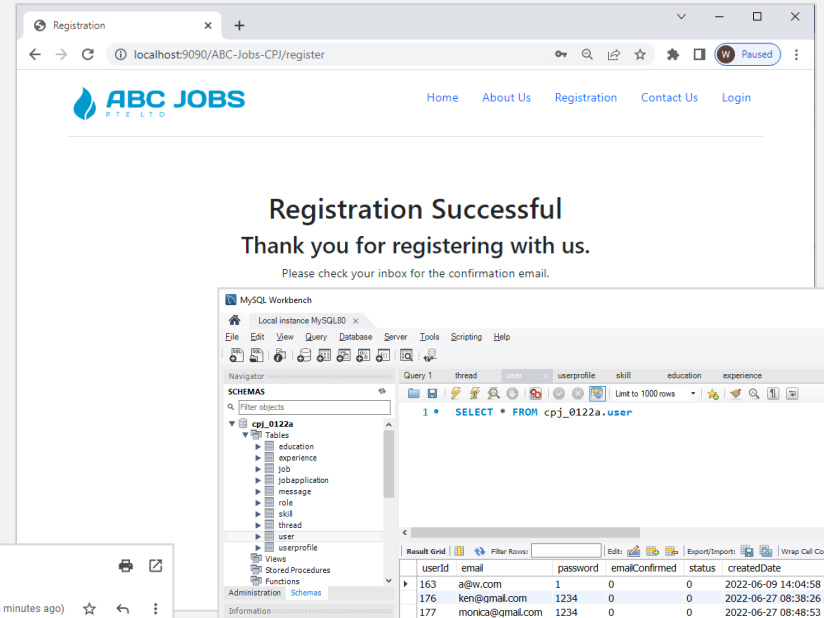
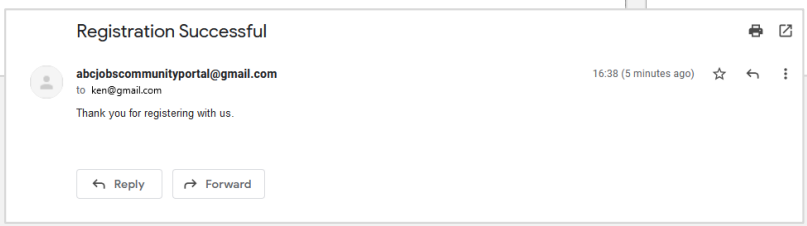
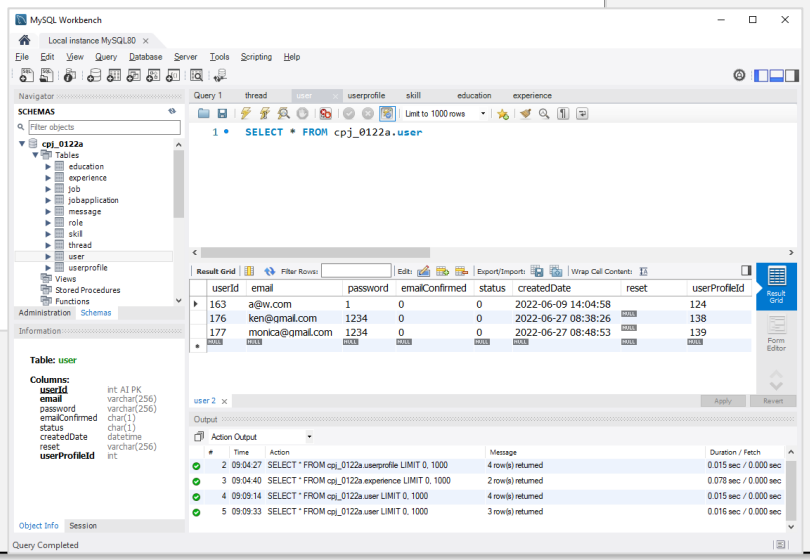
- Integration Testing
  - Verify the functional behaviors of the interfaces
  - Check database are updated accordingly
  - Check email is send out









3. Tests Selected

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- Usability Testing
  - To understand the overall user experience and to identify friction points that prevent users from completing tasks
  - TOT – time on task
  - UER – user error rate %
  - TSR – task success rate
  - NPS – net promoter score
  - CSAT – customer satisfaction

3. Tests Selected

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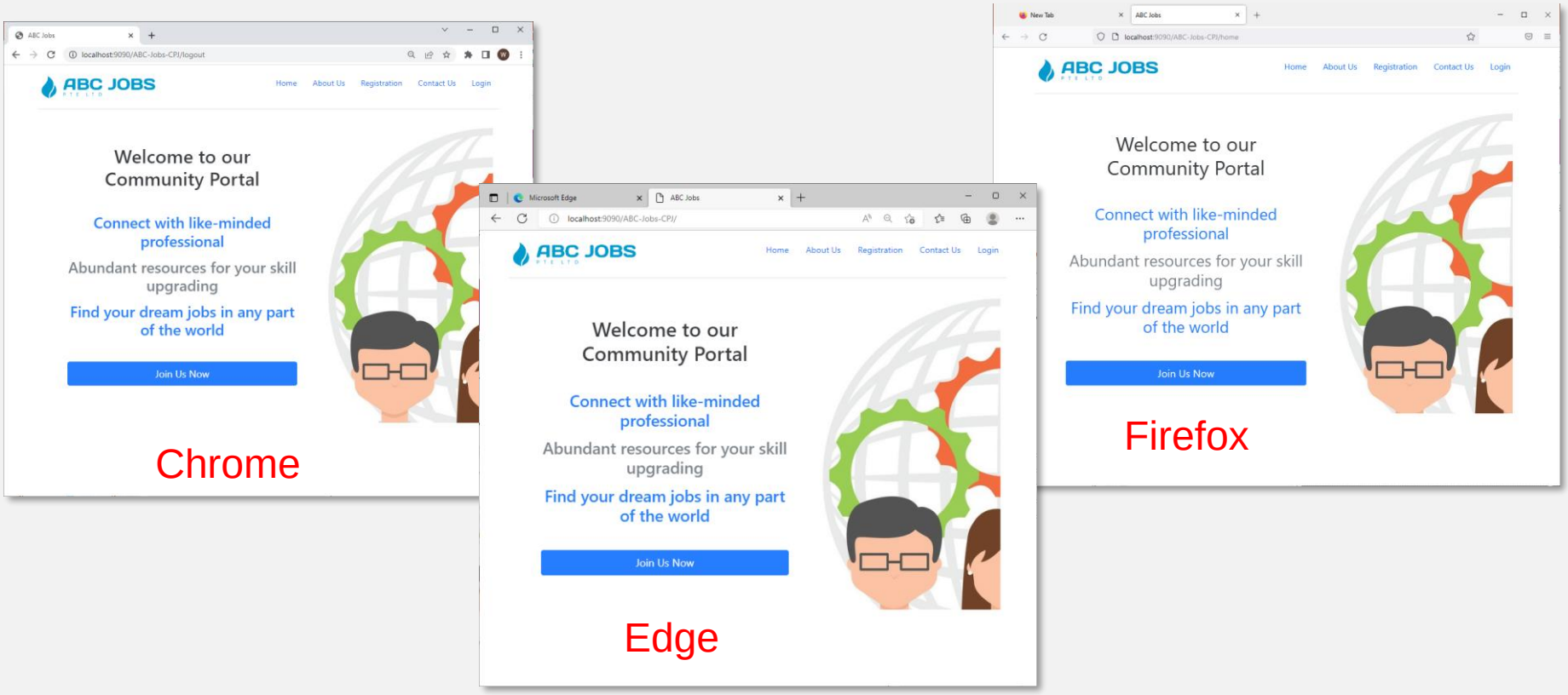
- Cross Browser Testing
  - To test on different browsers, operating systems, mobile devices to see look and feel and performance.
  - The goal of is to give a good user experience regardless of those devices used



4. Test Schedule

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Test Schedule			
Test Schedule ID	ACWD-CPJ-0122A		
Product ID/Name	ABC Jobs Pte Ltd – Community Portal		
Product Version	0.1		
Present Owner	Wee Chong, Teo		
Created On	16 June 2022		
Review On	28 June 2022		
Review By	Lithan		
Review Comments	NA		
Current Version	0.1		
Change Details	NA		
Current Status	Approved		
Signing Off Authority	Project manager's name	Project Manager	28 June 2022

4. Test Schedule

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	Complexity	Weightage	Functional Points	Total (Weightage*Functional Points)
Registration	M	3	6	18
Login	S	1	3	3
Forget Password	S	1	4	4
Forget Password Change Password	S	1	2	2
Update Profile	M	3	8	24
Search Users	S	1	2	2
Public Profile	S	1	1	1
Send Message	S	1	2	2
Read Message	S	1	1	1
List Message Board (Thread)	S	1	1	1
Post A Thread	M	3	2	6
Read A Thread	S	1	1	1
Post A Job	S	1	1	1
Apply A Job	M	3	2	6
List Job Opportunities and Responses	M	3	1	3
		Total Functional Points		75
		Hour/Functional Point		0.5
		Total Hours		37.5
		Number of Hours/day		8
		Number of Days		4.6875

4. Test Schedule

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S/N	Task	Resource	Estimate Effort (man-days)
1	Prepare Test Plan	Test Manager	2
2	Review Test Plan	Project Manager, Test Manager, Testers	1
3	Prepare Test Scripts	Testers	3
4	Review Test Scripts	Test Manager, Testers	1
5	Setup Test Environment	Developer, QA Team	1
6	Maintain Test Environment	QA Team	1
7	Establish Test Procedure	Testers, Developer, QA Team	1
8	Promote Software from Development to Test Environment	Developer, QA Team	1
9	Execute Testing and Record Faults	Testers	5
10	Re-execute Tests as needed	Testers	5
11	Provide Support and Resolve Faults	Developer, QA Team	5
12	Promote Software from Test to Development Environment	Developer, QA Team	1
13	Certify Application for release	QA Team	1
	Total		28

4. Test Schedule

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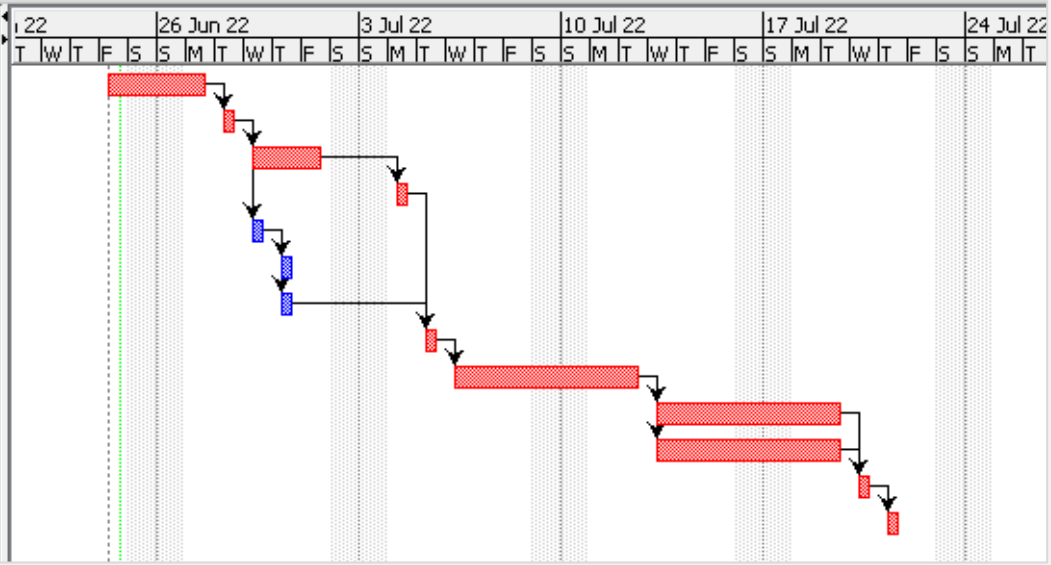
	Name	Duration
1	Prepare Test Plan	2 days
2	Review Test Plan	1 day
3	Prepare Test Script	3 days
4	Review Test Script	1 day
5	Setup Test Environment	1 day
6	Maintain Test Environment	1 day
7	Establish Test Procedure	1 day
8	Promote SW from Development to Test Environment	1 day
9	Execute Testing and Record Faults	5 days
10	Re-Test as needed	5 days
11	Provide Support and Resolve Fault	5 days
12	Promote SW from Test to Development Environment	1 day?
13	Certify Application for release	1 day?



5. Test Results

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Use Case ID	Function
UC0001	Registration
UC0002	Login
UC0003	Forget Password
UC0004	Update Profile
UC0005	Search
UC0006	Search Result
UC0007	Show Public Profile

Use Case ID	Scenario ID	Test Scenario
UC0001	TS0001	Valid new email
	TS0002	Register with existing email
UC0002	TS0003	Valid email and password
	TS0004	Invalid email and/or password
UC0003	TS0005	Valid existing email
	TS0006	Non-existing email
UC0004	TS0007	Update user information
	TS0008	Upload user picture
	TS0009	Add user education
	TS0010	Add user experience
	TS0011	Add user skill
UC0005	TS0012	Search for existing user
	TS0013	Search for non-existing user
UC0006	TS0014	Search produce a list of users
UC0007	TS0015	Show Public Profile page

5. Test Results

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Scenario ID	Test Case	Precondition	Test Step	Test Data	Expected Result	Actual Result	Pass/Fail
TS0001	1	1. Community Portal installed 2. New user	1. Goto Registration page 2. Enter email 3. Enter password 4. Enter confirm password	Email = ken@gmail.com Password = 1234 Confirm Password = 1234	Should go to the registration confirmation page.	As expected.	Pass
TS0002	2	1. Community Portal installed 2. Existing user	1. Goto Registration page 2. Enter email 3. Enter password 4. Enter confirm password	Email = ken@gmail.com Password = 1234 Confirm Password = 1234	Should reject registration due to existing email	As expected.	Pass
TS0003	1	1. Community Portal installed 2. Existing user	1. Goto Login page 2. Enter email 3. Enter password	Email = ken@gmail.com Password = 1234	Should go to the main page after successful login.	As expected.	Pass
TS0004	2	1. Community Portal installed 2. Non-existing user	1. Goto Login page 2. Enter email 3. Enter password	Email = gen@gmail.com Password = 1234	Should reject login due to non-existing email and return to login page.	As expected.	Pass
TS0005	1	1. Community Portal installed 2. Existing user	1. Goto Login page 2. Click on Reset Password link 3. Enter email	Email = ken@gmail.com	Should go to the reset confirmation page.	As expected.	Pass

5. Test Results

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Scenario ID	Test Case	Precondition	Test Step	Test Data	Expected Result	Actual Result	Pass/Fail
TS0006	2	1. Community Portal installed 2. Non-existing user	1. Goto Login page 2. Click on Reset Password link 3. Enter email	Email = gen@gmail.com	Should reject reset request due to non-existing email.	As expected.	Pass
TS0007	1	1. Community Portal installed 2. Existing user	1. Goto Profile page after login 2. Click Pencil icon in User Information section 3. Enter user information and submit	Email = ken@gmail.com Password = 1234 First Name = Ken Last Name = Goh Gender = Male Date of birth = 01-01-1999 City = Singapore Country = Singapore	Should go to the profile page to show the updated information.	As expected.	Pass
TS0008		1. Community Portal installed 2. Existing user	1. Goto Profile page after login 2. Click User icon in the left panel 3. Select the picture to upload and submit	Email = ken@gmail.com Password = 1234 File = ken.jpg	Should go to the profile page to show the updated information.	Did not show the profile page as expected. An error page of HTTP Status 500 – Internal Server Error is shown.	Fail

5. Test Results

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Scenario ID	Test Case	Precondition	Test Step	Test Data	Expected Result	Actual Result	Pass/Fail
TS0009		1. Community Portal installed 2. Existing user	1. Goto Profile page after login 2. Click Plus icon in Education section 3. Enter the education information	Email = ken@gmail.com Password = 1234 Year = 2020 Description = Master of Science Institute = NTU	Should go to the profile page to show the updated information.	As expected.	Pass
TS0010		1. Community Portal installed 2. Existing user	1. Goto Profile page after login 2. Click Plus icon in Experience section 3. Enter the experience information	Email = ken@gmail.com Password = 1234 Duration = 2020-Present Position = Full Stack Developer Company = Google	Should go to the profile page to show the updated information.	As expected.	Pass
TS0011		1. Community Portal installed 2. Existing user	1. Goto Profile page after login 2. Click Plus icon in Skill section 3. Enter the skill information	Email = ken@gmail.com Password = 1234 Year = 2020 Description = Google Cloud Certified Institute = Google	Should go to the profile page to show the updated information.	As expected.	Pass
TS0012	1	1. A user Monica exists 2. Login successful with an existing user	1. Goto Search page by clicking on the Search link 2. Enter the search text	Login email/password = ken@gmail.com/1234 Search text = monica	A record with name Monica should display in a list.	As expected.	Pass

5. Test Results

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Scenario ID	Test Case	Precondition	Test Step	Test Data	Expected Result	Actual Result	Pass/Fail
TS0013	2	1. A user Mary does not exist 2. Login successful with an existing user	1. Goto Search page by clicking on the Search link 2. Enter the search text	Login email/password = ken@gmail.com/1234 Search text = mary	Should display "Nothing found" message.	As expected.	Pass
TS0014	1	1. 3 users located in Singapore exists 2. Login successful with an existing user	1. Goto Search page by clicking on the Search link 2. Enter the search text	Login email/password = ken@gmail.com/1234 Search text = singapore	A list of users located in Singapore should be displayed in a list.	As expected.	Pass
TS0015	1	1. Login successful with an existing user 2. Search result with a user	1. Click on the name	Login email/password = ken@gmail.com/1234 Search text = john	Should display the Public Profile Page with the selected user information.	As expected.	Pass

5. Test Results

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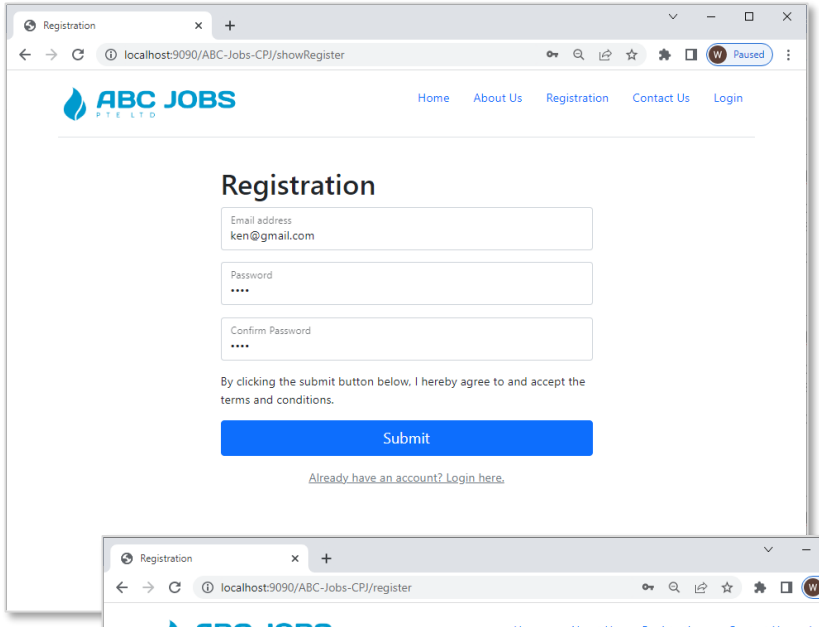

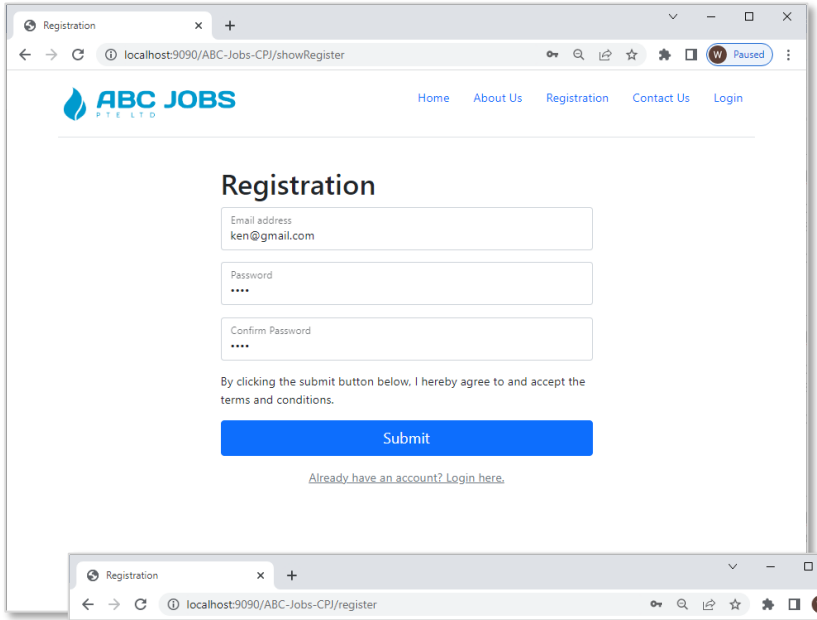

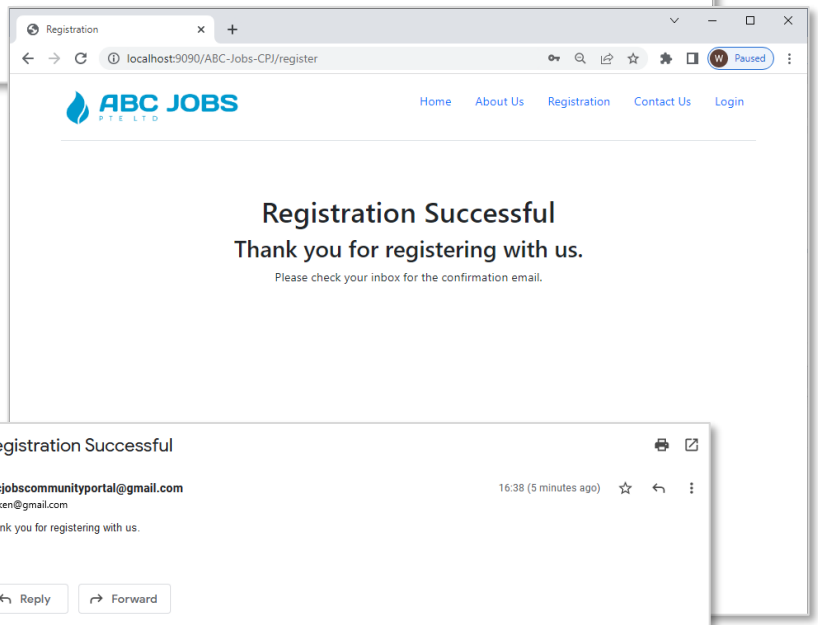

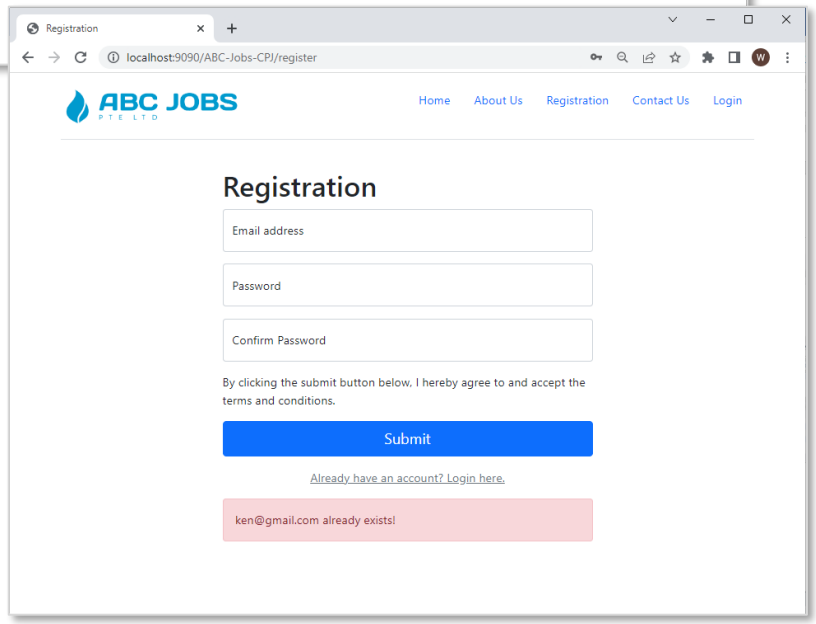

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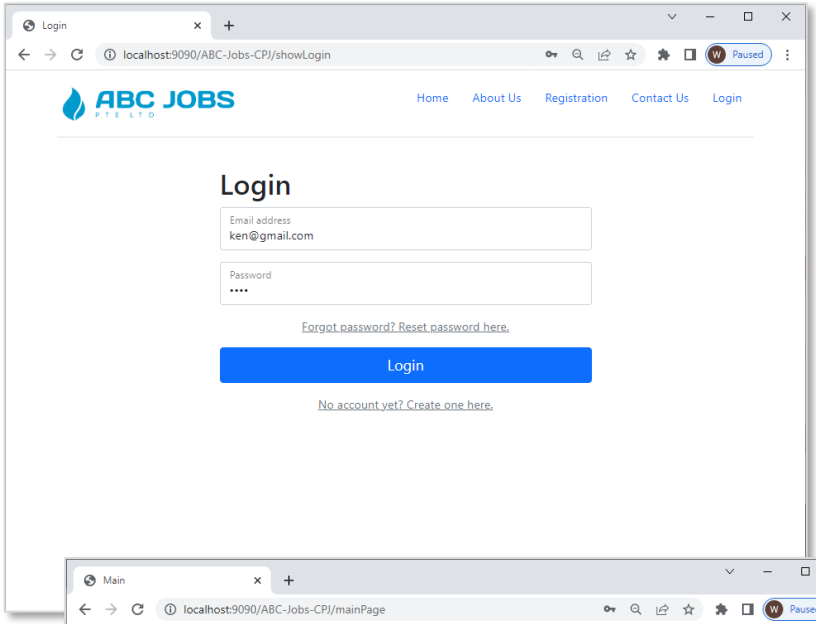

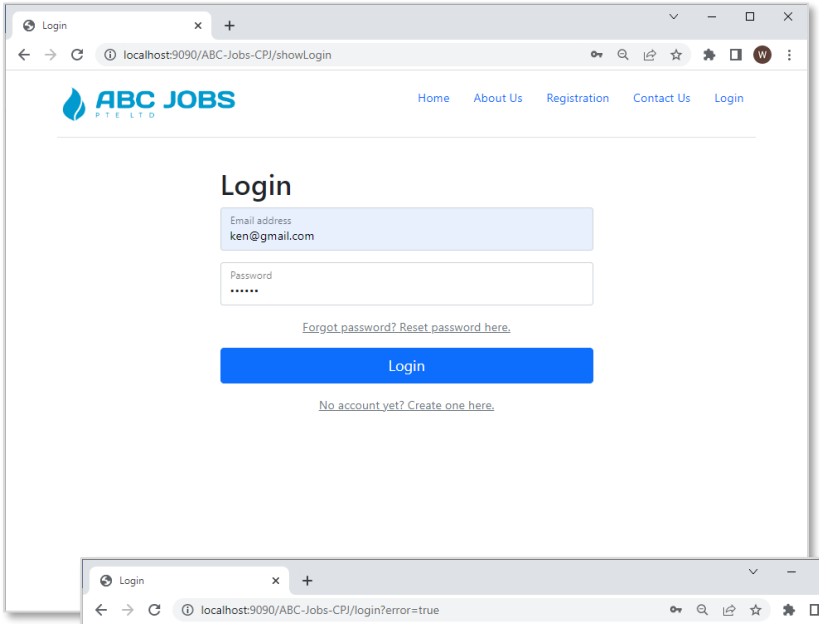

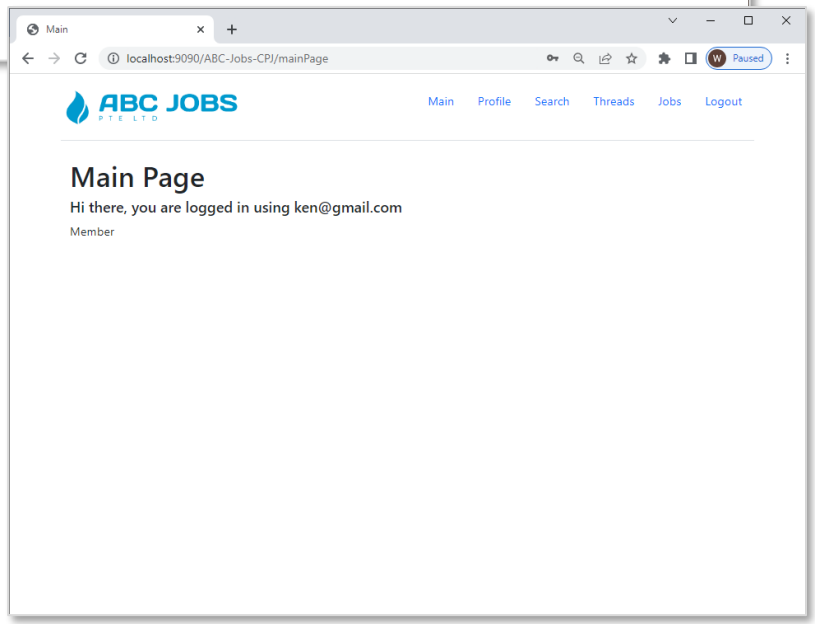

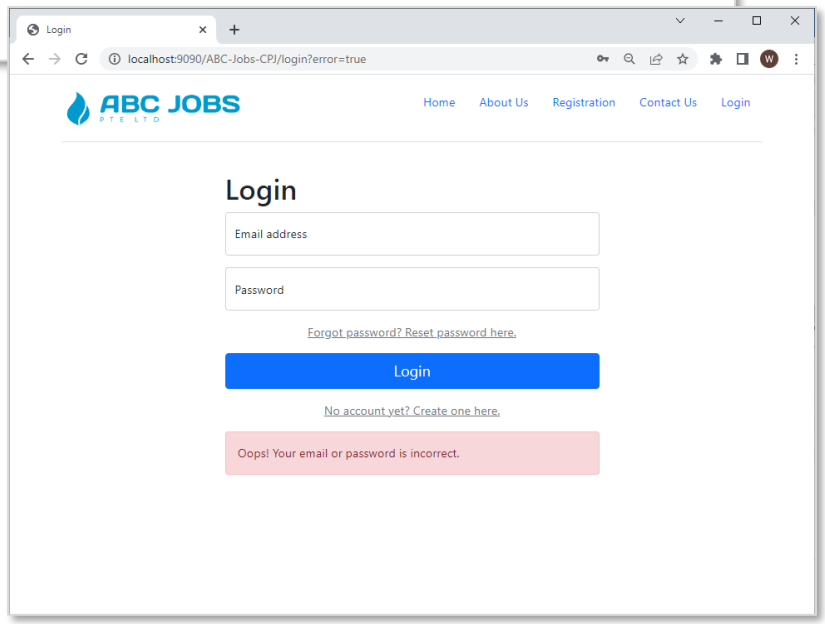

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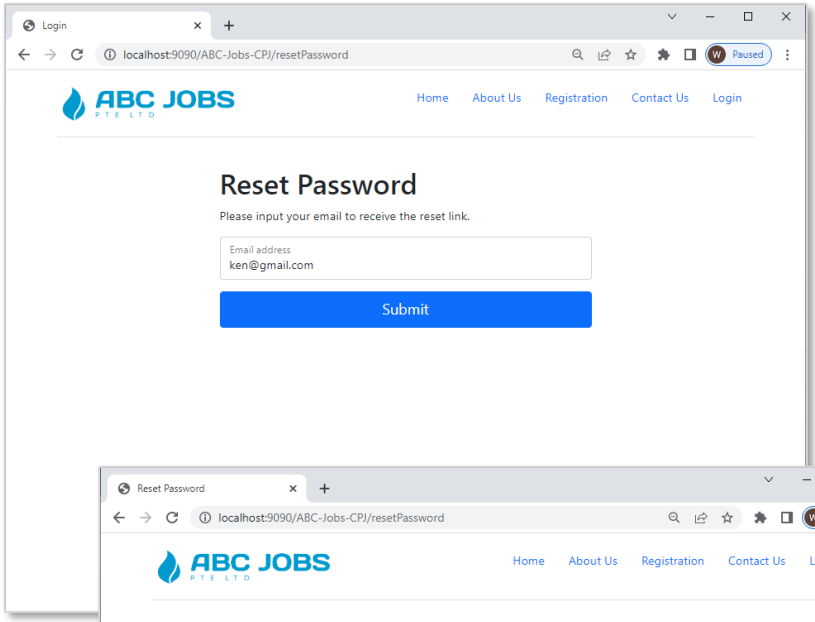

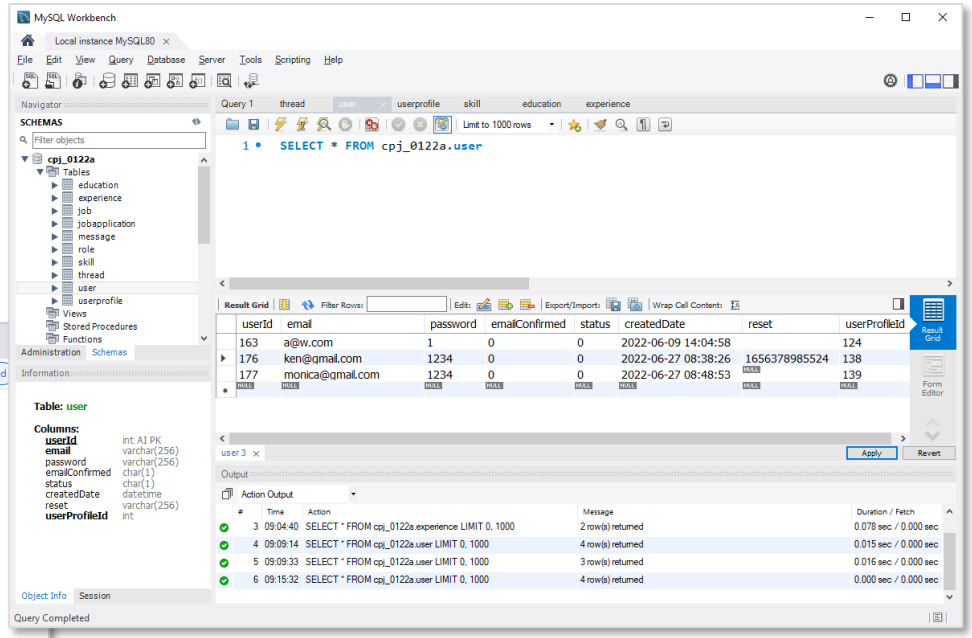

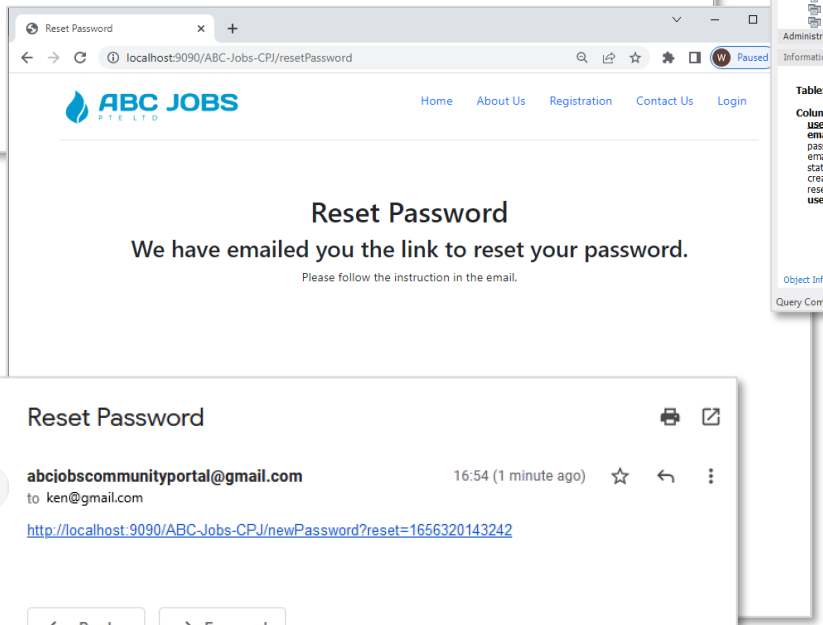

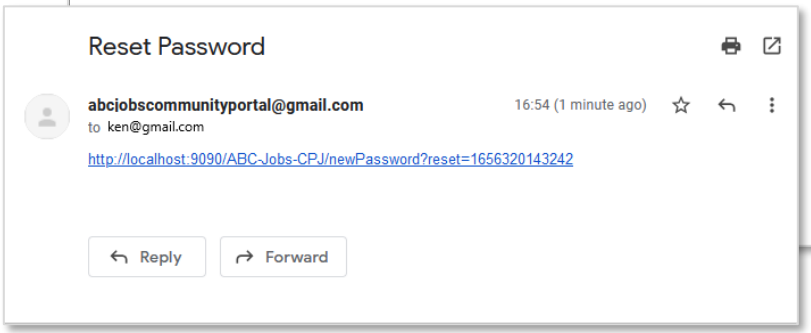

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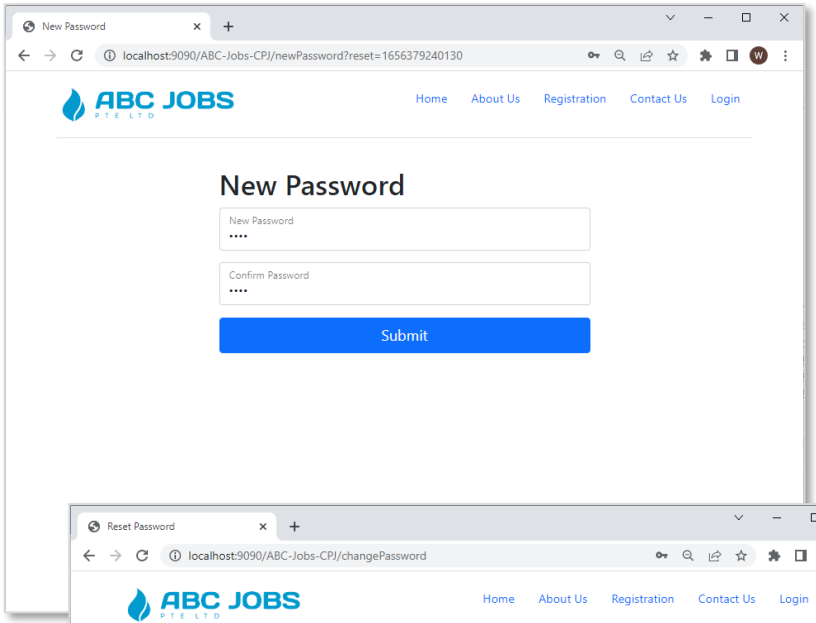

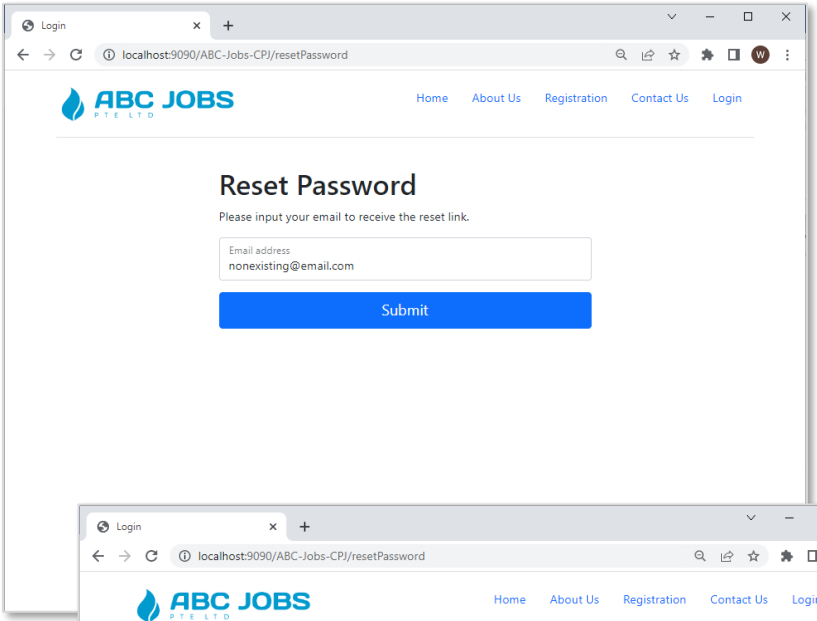

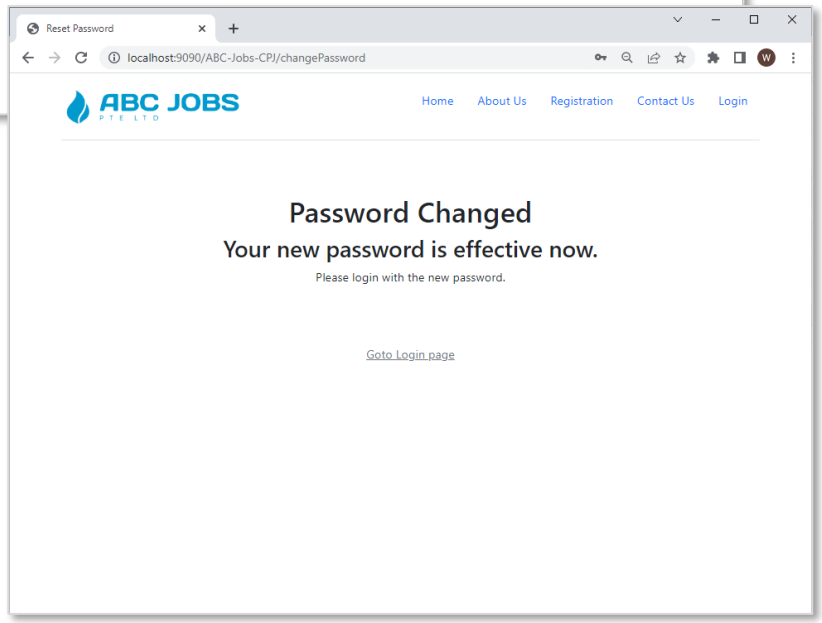

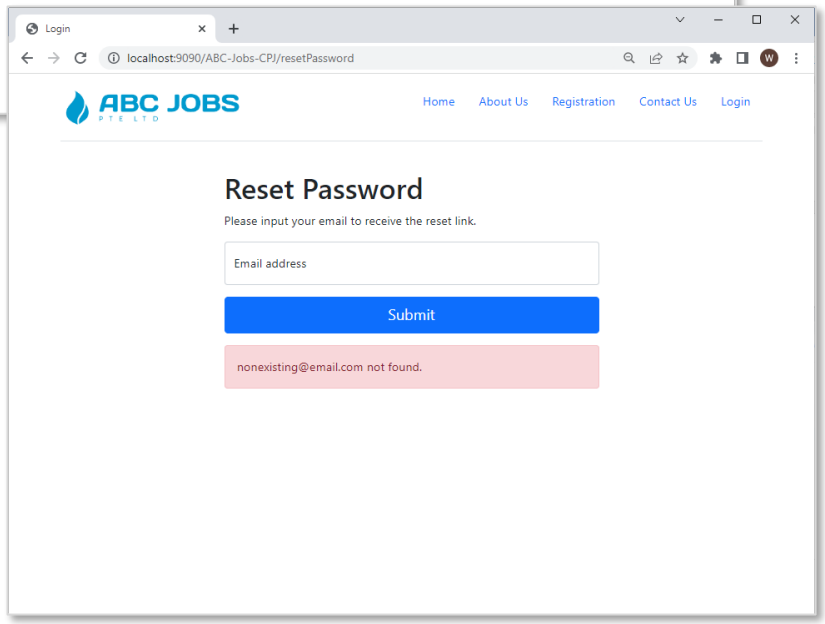

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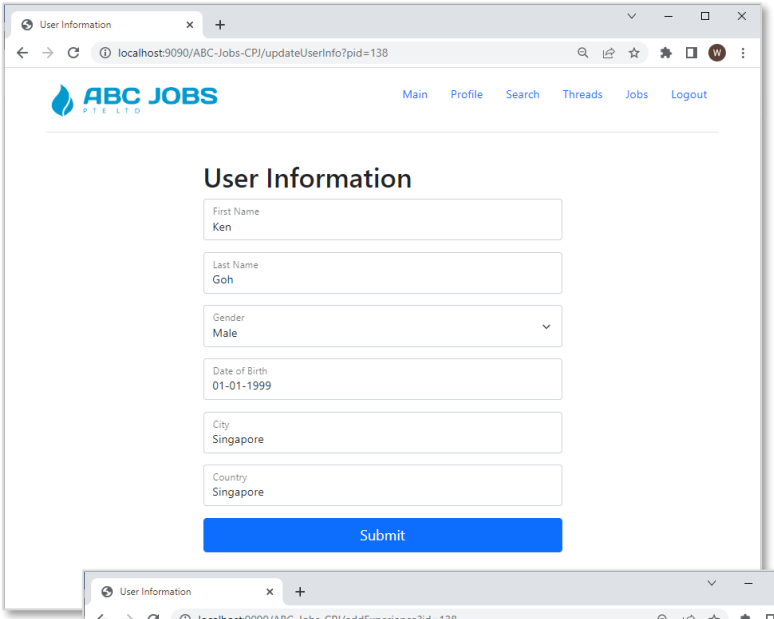

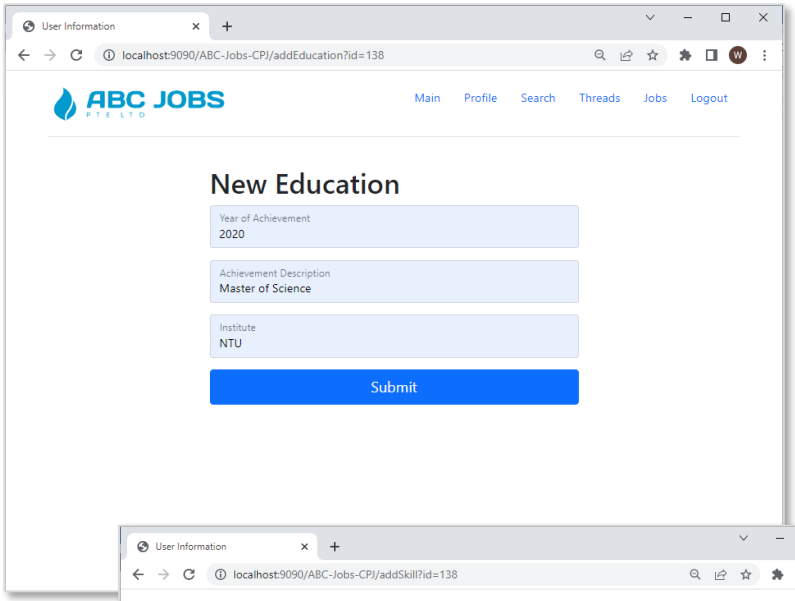

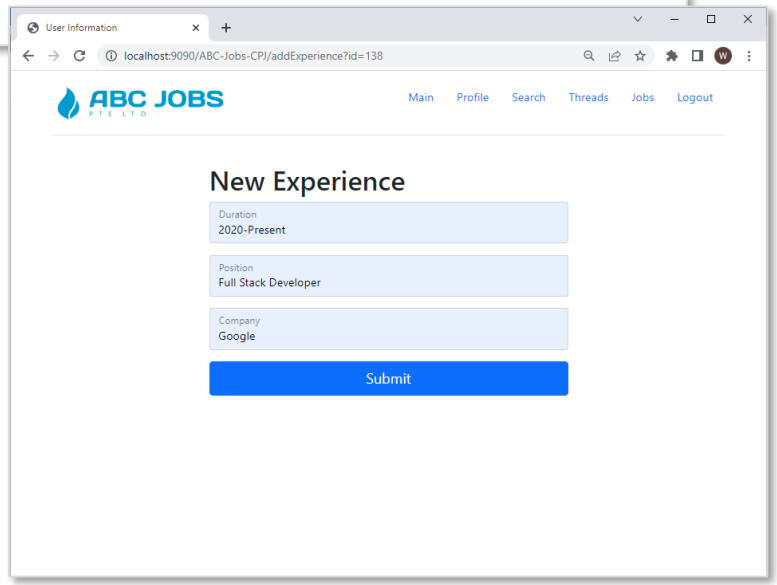

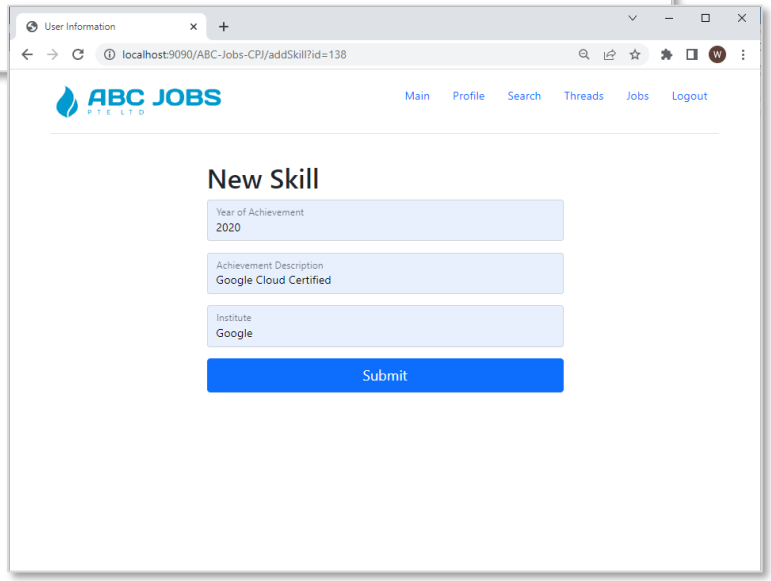

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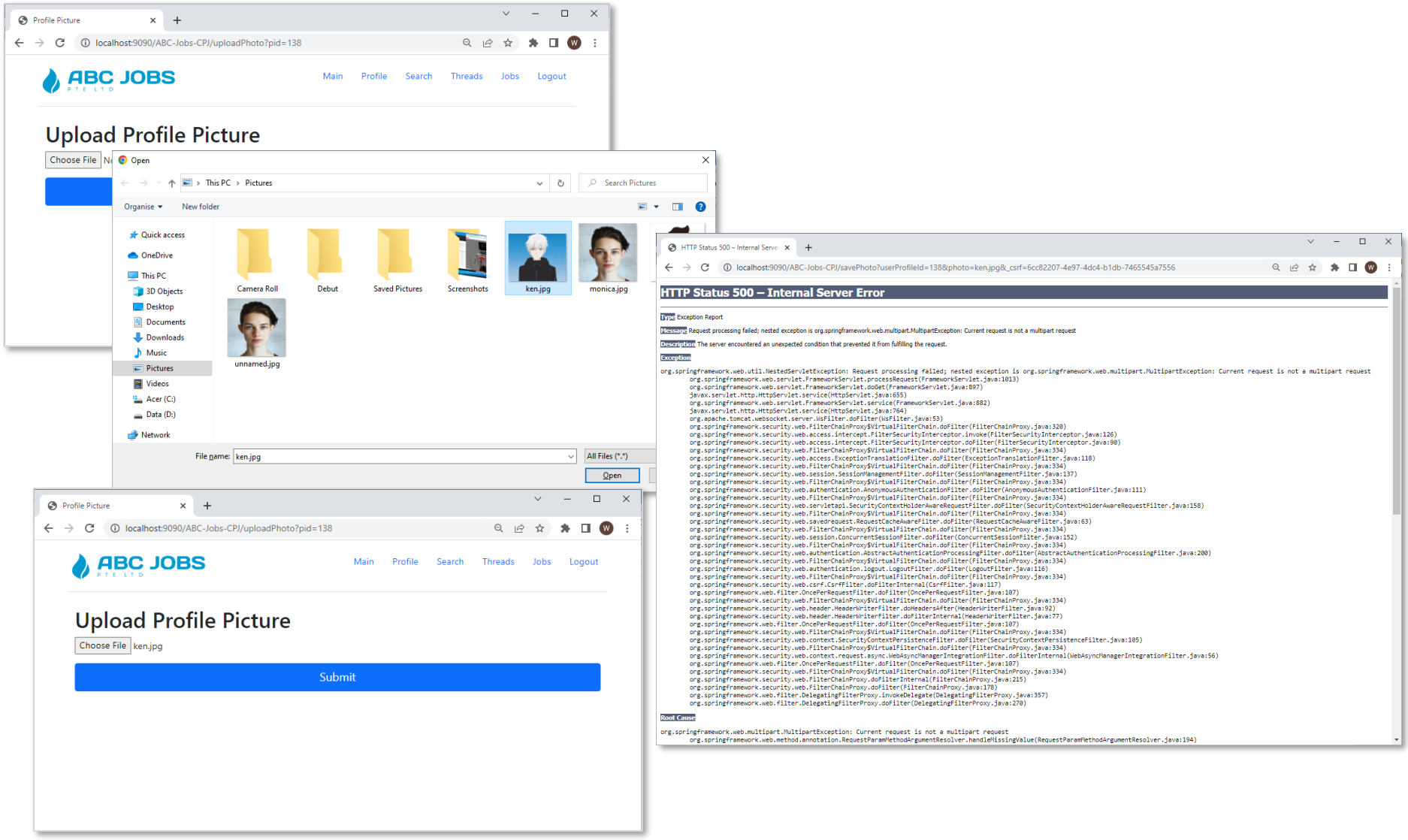

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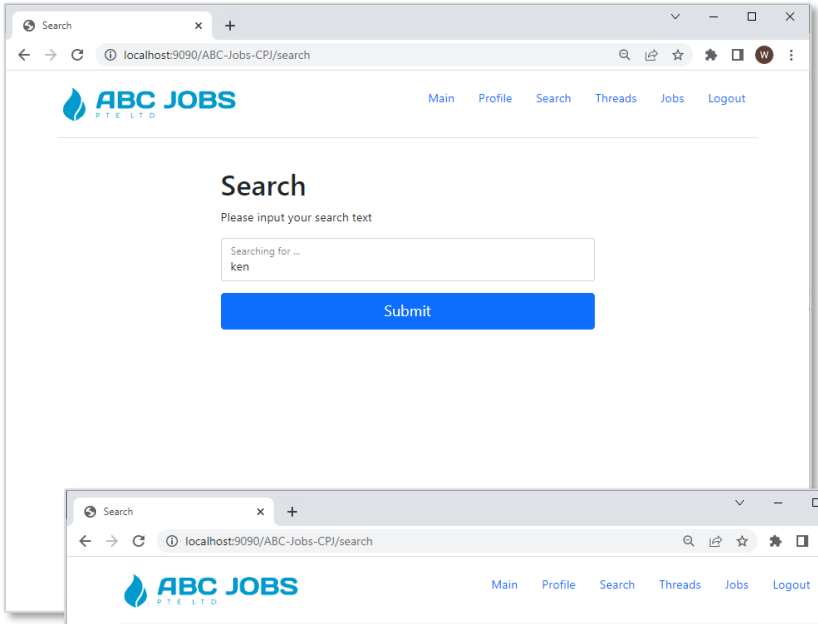
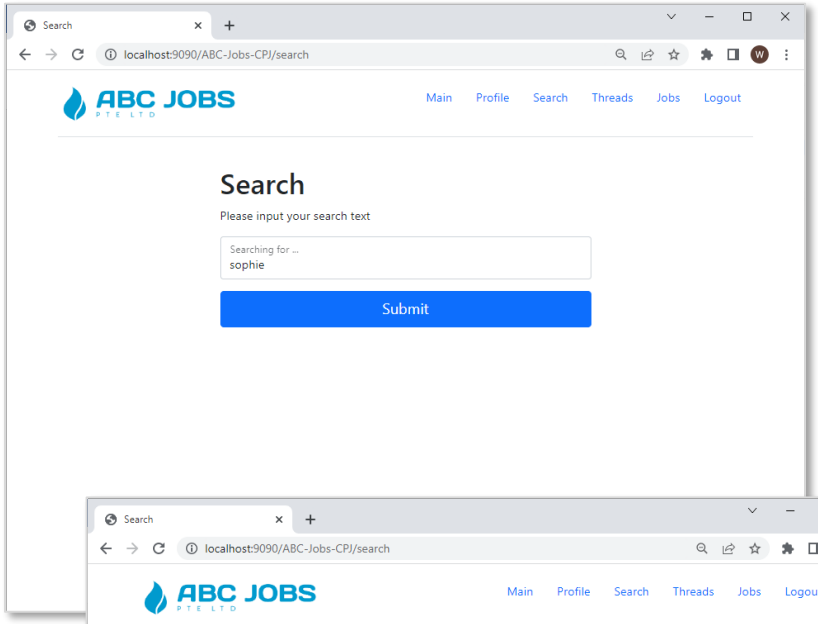
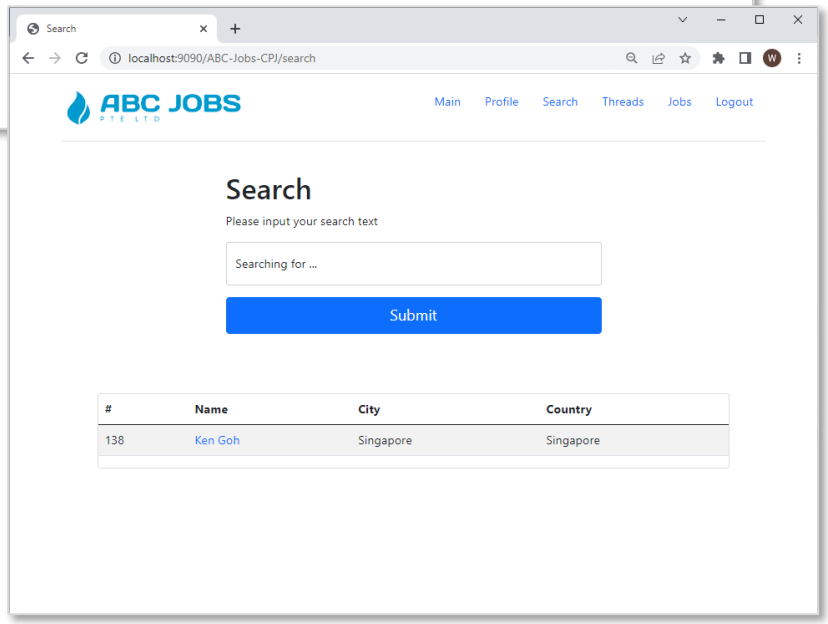
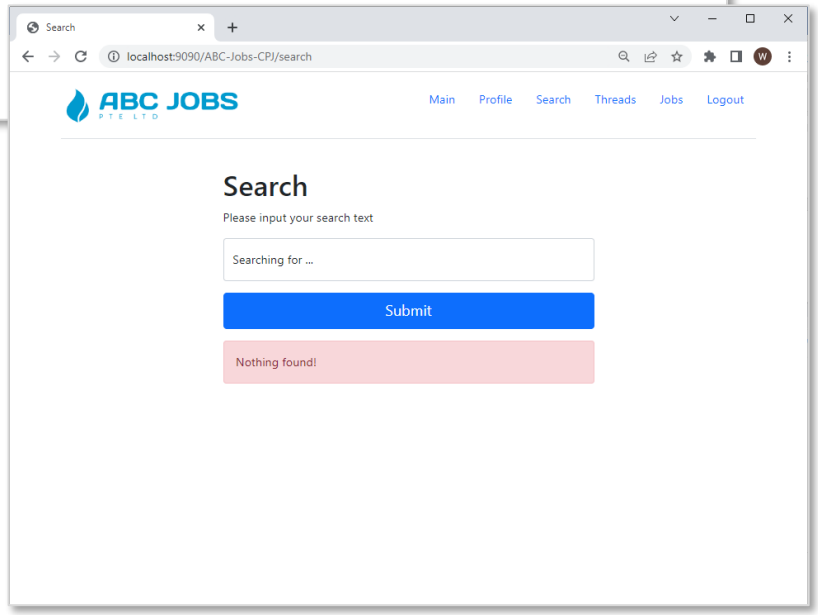


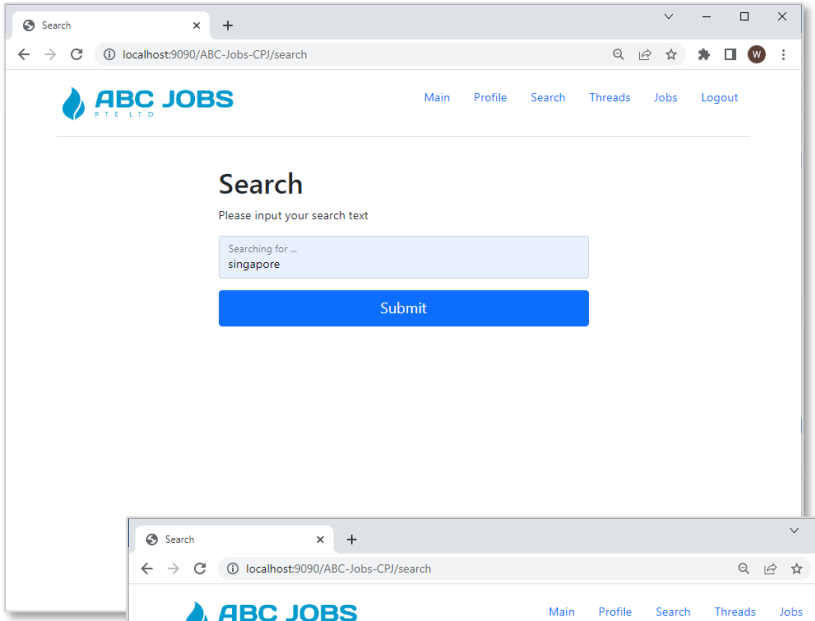


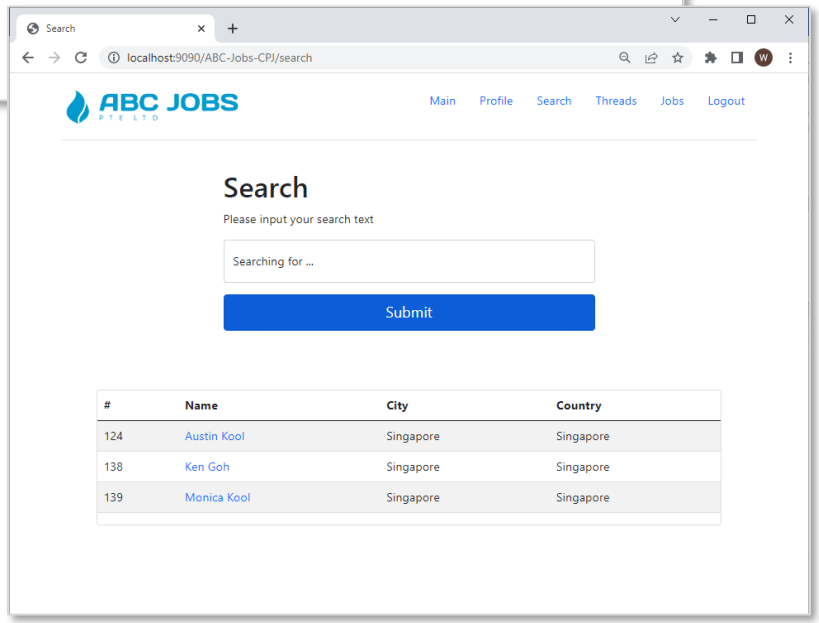


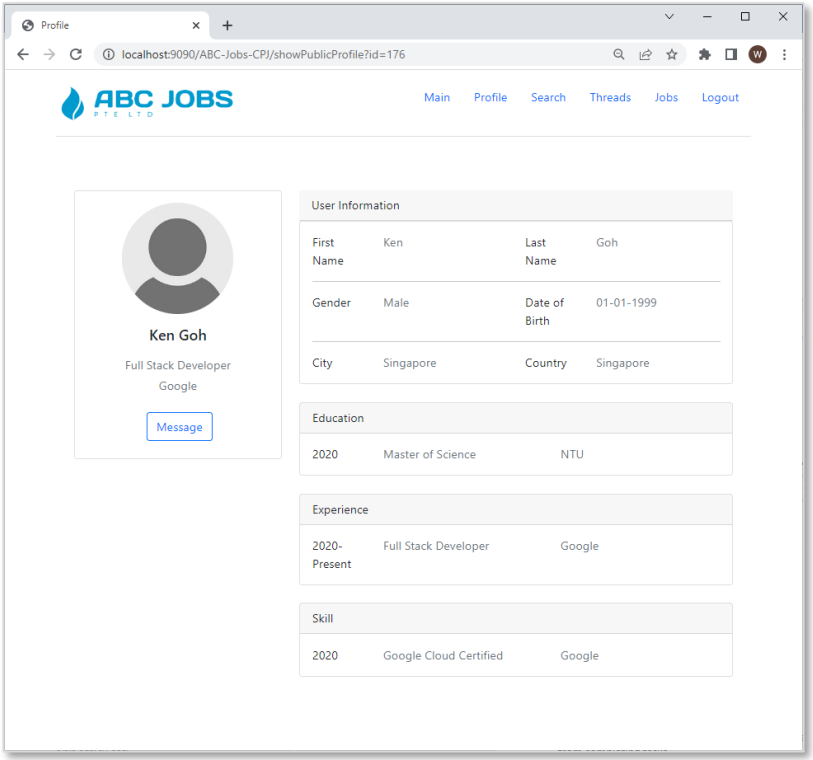


5. Test Results

LITHAN







5. Test Results

LITHAN

Usability Test – TOT, UER, TSR

Participant Name	TOT (seconds)	UER (#errors)	TSR (Success/Fail)	Observation	Feedback
WeiZhong, Ng	35	0	Success	Completed task without issue	Very little input information required
Ramya	25	0	Success	Completed task without issue	Simple entry
Muthukumari	65	1	Success	User has error at confirmed password	Undecisive on which email address to use
Siti Nafisah	36	0	Success	Completed task without issue	Quick and easy to register
Khairul	50	1	Success	User has come issue with the confirmed password	Minimum input of data
	TOT	UER	TSR		
Average Score	42.2	40%	100%		

5. Test Results

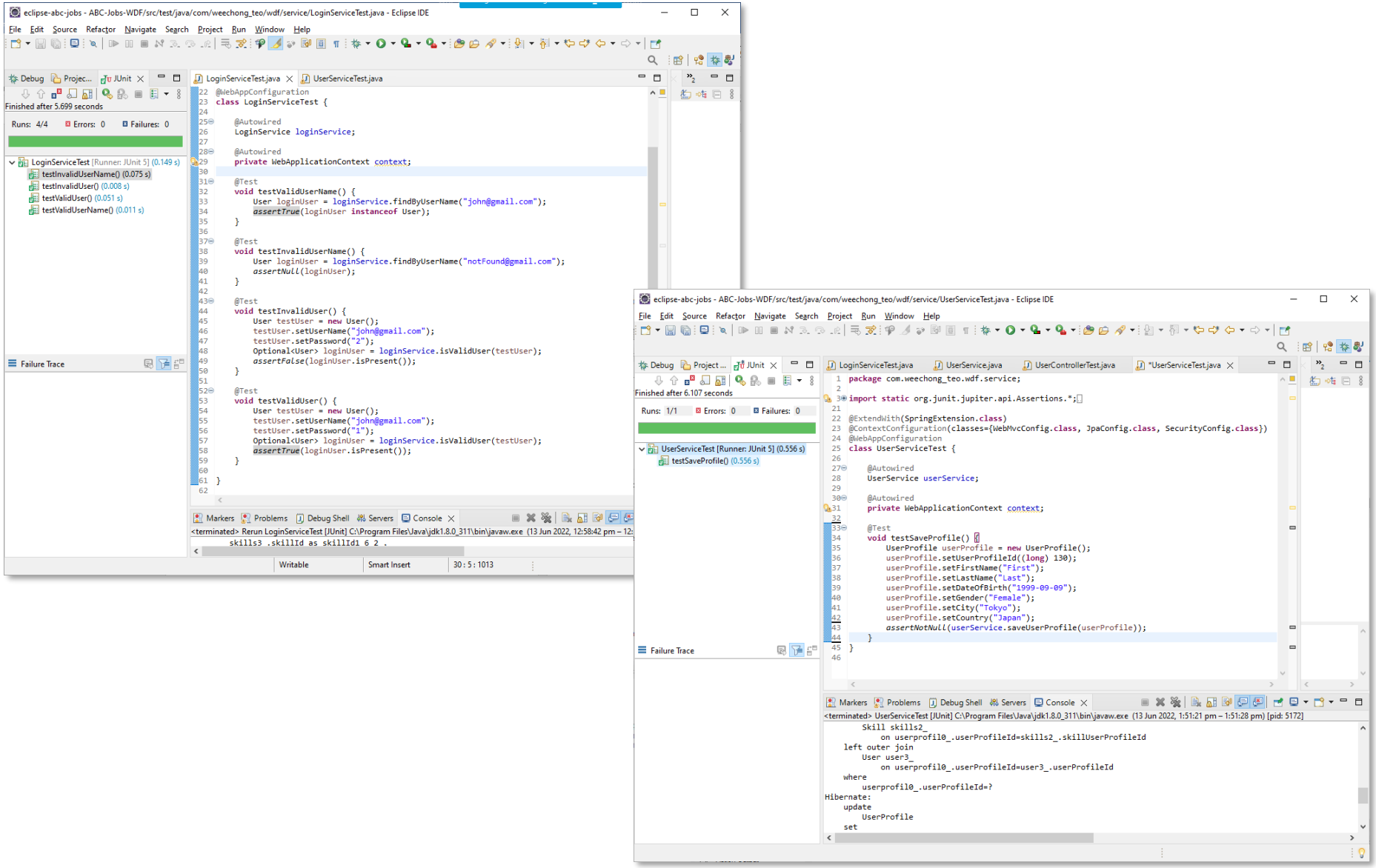
LITHAN

Usability Test – CSAT, NPS

Participant Name	Satisfaction Score	Promoting Score
WeiZhong, Ng	3	7
Ramya	5	8
Muthukumari	5	9
Siti Nafisah	5	10
Khairul	5	8
	CSAT	NPS
	80%	40%

6. Testing Tools

LITHAN



7. Project Milestones & Tasks

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Project Task ID	Project Task Description	Project Milestone ID
1	Analyze and suggest choice of Test Methods	1
2	Schedule the Test Optimally	1
3	Develop the Phase Test Plan	1
5	Develop Test Cases & Scripts	2
6	Execute the Tests & Document the results	3

8. Milestone Feedback & Action taken

LITHAN

Project Milestone ID	Milestone Feedback received from Tutor / Learning Facilitator	Action Taken (Yes / No)
1	To include test schedule cover page	Yes
2		
3		

9. Modifications Made based On Feedback

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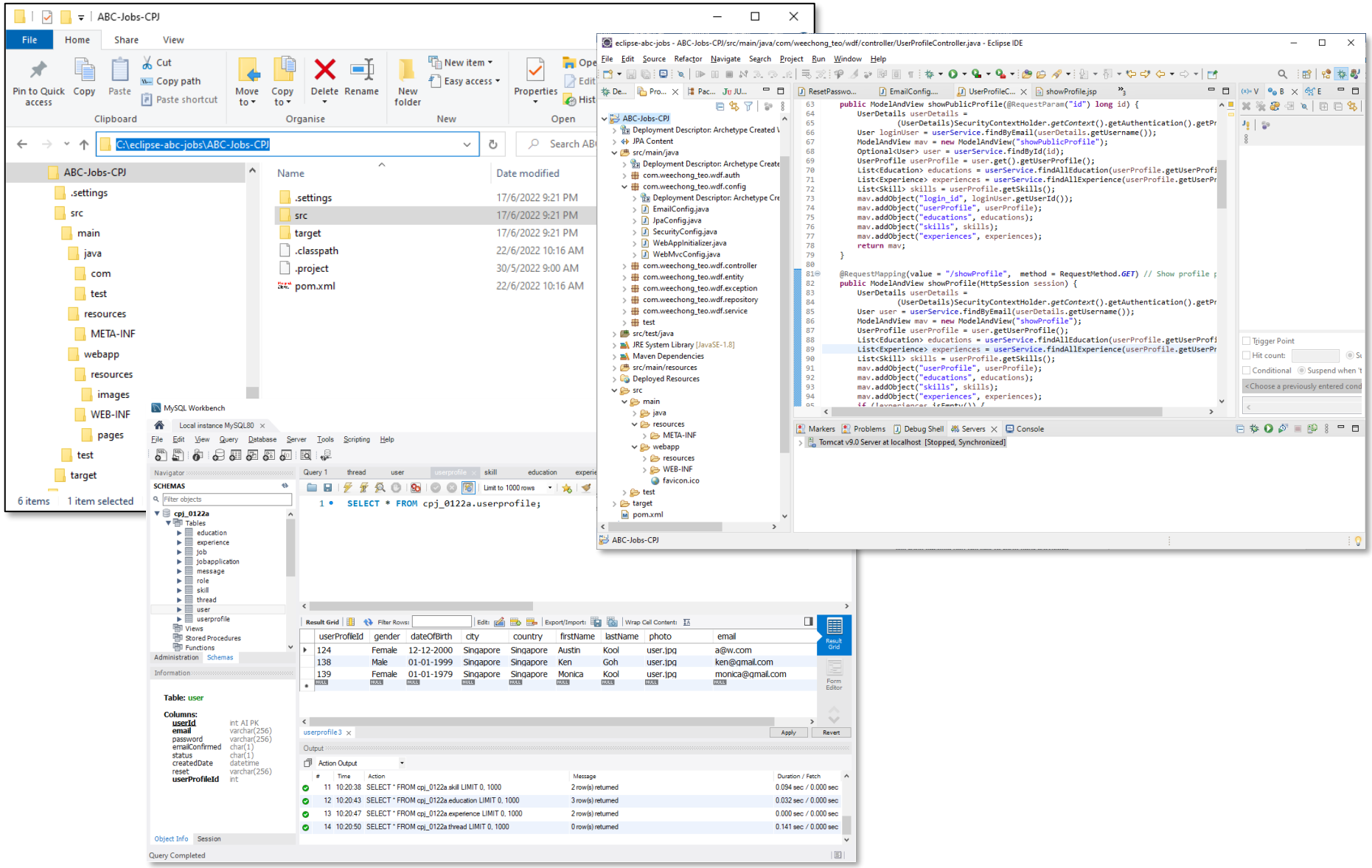
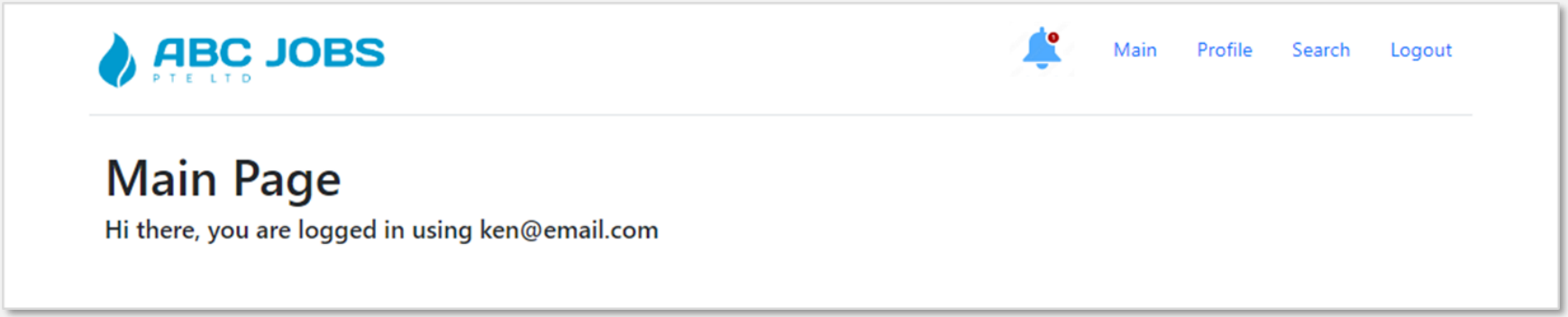
- ❑ Test schedule updated with a cover page

10. Project Results

LITHAN



11. Proposed Improvements

LITHAN

- **List of Improvements**
- An alert notification feature can be added to the system. This notification module can notify user the following events.
  - A new message has been received
  - A new thread has been posted
  - A new job posting has been placed
  - A new status to the user's job application