
Test Document

for

Mess Automation System

Version 0.1

Prepared by

Group:7

Group Name:The Software Savants

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Date: 2 Apr 2023



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Revisions

| Version | Primary Author(s) | Description of Version | Date Completed |
|---------|---|------------------------|----------------|
| 0.1 | Ashutosh Agrawal Sawan H N Mansi Singh Prapti Dagli Sanjay Kumar Archisha Singh Mokshagna Prattipati Charugundla Chethan | First Draft | 02/04/2023 |

• Introduction

Testing Strategy: System tests are automated whereas Integration Tests and Unit tests are implemented manually.

Testing Timeline: The testing was conducted after the implementation was completed.

Testers: The testing process was done by the developers themselves.

Coverage Criteria: We used decision coverage criteria and branch coverage criteria for unit testing.

Tools Used:

- **System Testing :** TestComplete, a commercial automated testing tool developed by SmartBear Software. It is a comprehensive tool for system, functional, regression, and GUI testing of desktop, web, and mobile applications across various platforms, including Windows, macOS, Linux, iOS, and Android.

• Unit Testing

1. Register

The test was to check the register component. How the component is reacting under right, wrong and empty inputs.

Unit Details: Class: Register.ejs Function: Register

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, the user was registered successfully whereas under wrong and empty inputs exceptions were raised.

Inputs: {name="Prapti", RollNo="210743", emailid="praptid@iitk.ac.in", password="123"}

Output: Registered Successfully [PASSED]

Inputs: All fields empty

Output: Signup Failed [PASSED]

Inputs: Any one field empty

Output: Signup Failed [PASSED]

Inputs: All fields same except password

Output: Signup Failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

Additional Comments: Additional tests regarding registration were conducted but not mentioned.

2. Login

The test was to check whether the user is able to login with proper credentials.

Unit Details: Class: Login.ejs Function: Register

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to login successfully whereas under wrong and empty inputs exceptions were raised.

Inputs: {emailid="praptid@iitk.ac.in", password="123"}

Output: Login Successfully [PASSED]

Inputs: {emailid="praptid@iitk.ac.in", password="12"}

Output: Login Failed due to wrong password [PASSED]

Inputs: Any one field empty

Output: LoginFailed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

3. Student->Complain

The test was to check whether the user is able to submit his complaint.

Unit Details: Class:Complain.ejs Function:Complain

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to submit complaints successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{text="Milk quality is very bad"}

Output:Complain submitted successfully [PASSED]

Inputs:emailid="praptid@iitk.ac.in",password="12"}

Output:Login Failed due to wrong password [PASSED]

Inputs: Empty Complain

Output: Complaint submission failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

4. Student->Apply for rebate

The test was to check whether the user is able to apply for rebate

Unit Details: Class:Rebate.ejs Function:Rebate

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to apply for rebates successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{Starting Date="04/01/2023" , Ending Date="04/05/2023"}

Output:Rebate request submitted successfully [PASSED]

Inputs:{Starting Date="04/01/2023"}

Output:Rebate request failed [PASSED]

Inputs:{Starting Date="04/01/2023" , Ending Date="01/01/2023"}

Output:Rebate request failed [PASSED]

Inputs: Any one field empty

Output: Rebate request failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

5. Student->Extras

The test was to check whether the user is able to order for extras.

Unit Details: Class:Extras.ejs Function: Extras

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to order for extras successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{Milk:"1",FriedRice:"2"}

Output:Ordered Successfully [PASSED]

Inputs:{Milk:"-1",FriedRice:"2"}

Output:Ordered Failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

6. Manager->Complaints

The test was to check whether the user is able to see the complaint and reply to the solution.

Unit Details: Class:Complaint.ejs Function: Complain

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to login successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{reply="I will look into the matter"}

Output:Replied Successfully [PASSED]

Inputs: Empty Reply

Output: Replied Failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

7. Manager->Extras

The test was to check whether the user is able to add extra items and set its price.

Unit Details: Class:extras.ejs Function: extras

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to login successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{name="Paneer Bhujia",price="35"}

Output:Extras Added Successfully [PASSED]

Inputs:{name="Rice",price="0"}

Output:Extras Failed to add [PASSED]

Inputs: Any one field empty

Output:Extras Failed to add [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

8. Manager->Access Account

The test was to check whether the user is able to change the mess bill and dues paid by a particular resident.

Unit Details: Class:accessAccount.ejs Function: AccessAccount

Test Owner: Prapti Dagli and Mansi Singh

Test Date: [28/03/2023]-[29/03/2023]

Test Results: Passed. Under right inputs, users were able to generate bills of students successfully whereas under wrong and empty inputs exceptions were raised.

Inputs:{Starting Date="04/01/2023" , Ending Date="04/05/2023", DailyCost="60"}

Output: Submitted successfully [PASSED]

Inputs:{Starting Date="04/01/2023" , Ending Date="03/01/2023", DailyCost="60"}

Output: Submit Failed [PASSED]

Inputs: Any one field empty

Output:Submission Failed [PASSED]

Structural Coverage: Code Coverage :100% and Branch Coverage :100%

• Integration Testing

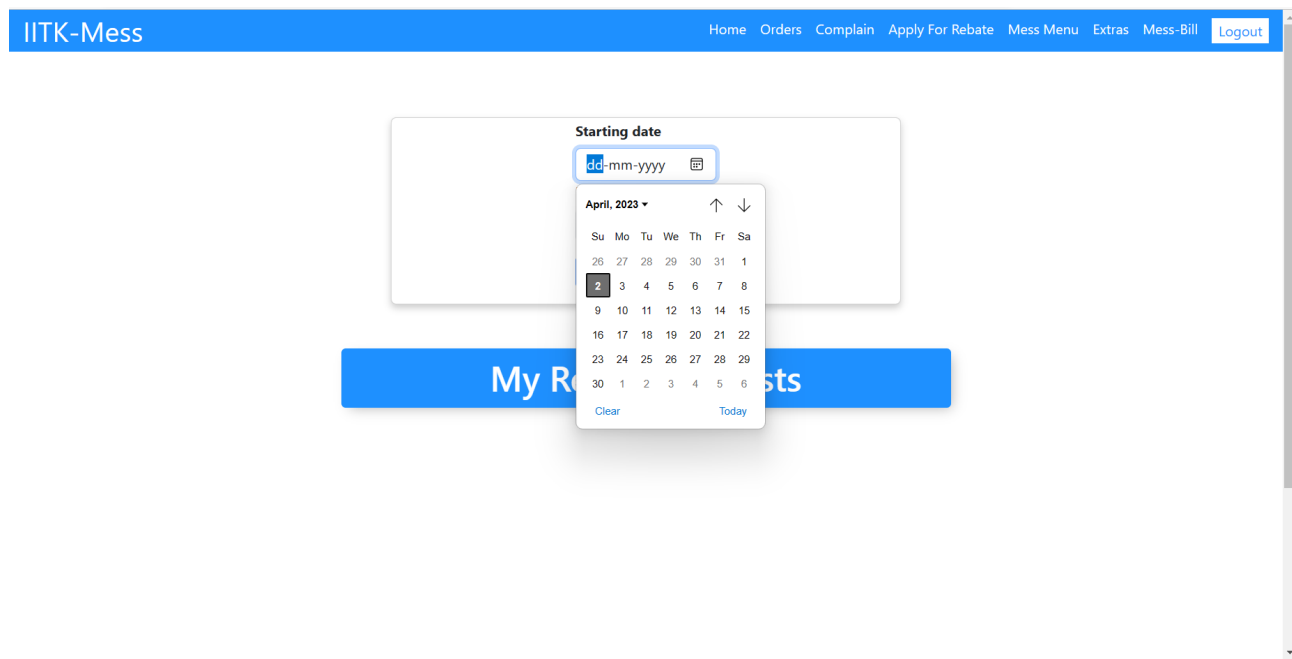
1. Rebate: Tests related to rebate requests from resident to manager and rebate approval from manager to resident

Module Details: module containing tests for whether a manager can receive rebate requests from residents and whether residents can view rebate approval status from the manager and also see his/her rebate days in the home section.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [30/03/2023] - [31/03/2023]

Test Results:



IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Starting date

04-04-2023

Ending Date

13-04-2023

Submit

My Rebate requests

IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Starting date

dd-mm-yyyy

Ending Date

dd-mm-yyyy

Submit

My Rebate requests

X

From:

April 4, 2023

To:

April 13, 2023

Days:

9

Status:

pending

IITK-Mess

[Orders](#) [Complaints](#) [Rebate Approval](#) [Mess Menu](#) [Extras](#) [Access Account](#) [Logout](#)

Rebate requests

✓

X

Roll: 100010

No. of days: 9

From: April 4, 2023

To: April 13, 2023

IITK-Mess

[Home](#) [Orders](#) [Complain](#) [Apply For Rebate](#) [Mess Menu](#) [Extras](#) [Mess-Bill](#) [Logout](#)

Starting date

dd-mm-yyyy

Ending Date

dd-mm-yyyy

Submit

My Rebate requests

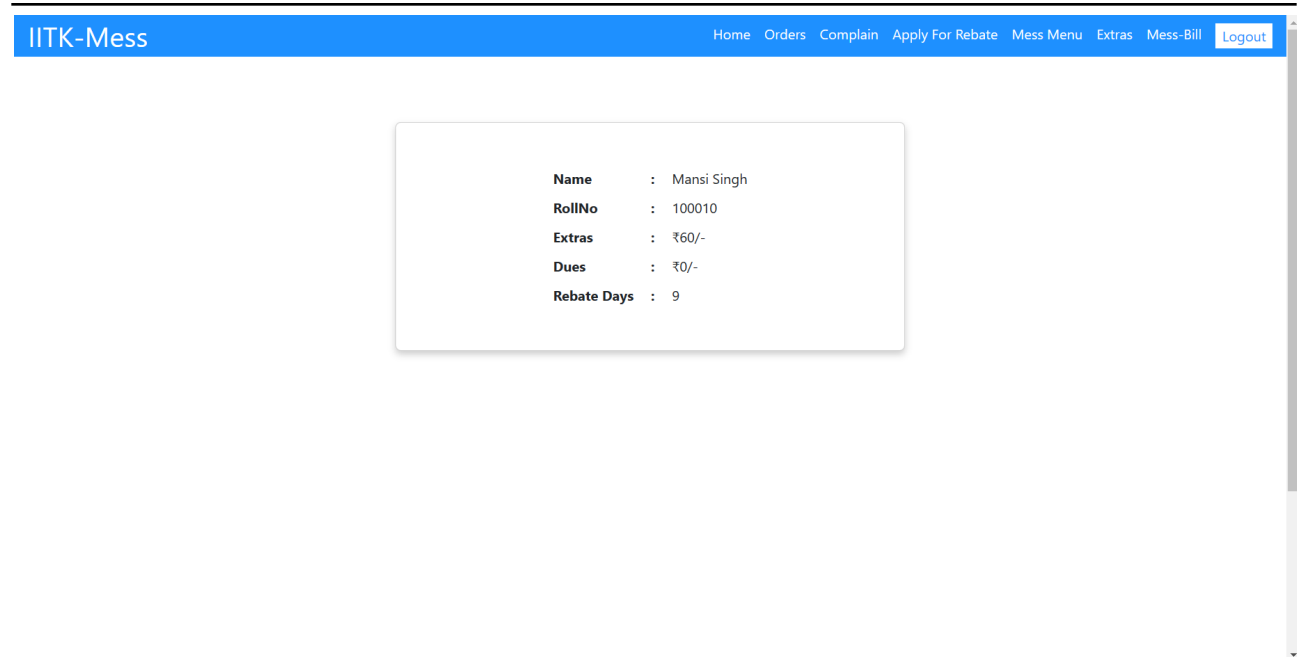
X

From: April 4, 2023

To: April 13, 2023

Days: 9

Status: Approved



Additional Comments: A student is easily able to apply for approval of rebate application.

2. Complain: Tests related to complaints from resident to manager and reply from manager to resident

Module Details: module containing tests for whether a manager can receive complaints from residents and whether residents can view replies from the manager.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [30/03/2023] - [31/03/2023]

IITK-Mess

[Home](#) [Orders](#) [Complain](#) [Apply For Rebate](#) [Mess Menu](#) [Extras](#) [Mess-Bill](#) [Logout](#)

Type Your Complaint Below

Quality of food is very [bad](#).

Submit

My Complaints

IITK-Mess

[Home](#) [Orders](#) [Complain](#) [Apply For Rebate](#) [Mess Menu](#) [Extras](#) [Mess-Bill](#) [Logout](#)

Type Your Complaint Below

Submit

My Complaints

X

Complaint: Quality of food is very bad.
Reply: pending

Complaints

| | |
|------------|------------------------------|
| Roll: | 210279 |
| Complaint: | first complaint |
| Reply | |
| Send | |
| Roll: | 210279 |
| Complaint: | second complaint |
| Reply | |
| Send | |
| Roll: | 210279 |
| Complaint: | check |
| Reply | |
| Send | |
| Roll: | 100010 |
| Complaint: | Quality of food is very bad. |
| Reply | |
| Send | |

IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Type Your Complaint Below

Submit

My Complaints

X

Complaint:

Quality of food is very bad.

Reply:

we will look into this matter.

Additional Comments: A student is easily able to Complain regarding any issue about the mess.

3. Extras: Tests related to seeing extras from resident to manager and adding extras from manager to resident

Module Details: module containing tests for whether a manager can add extras and whether residents can view extras from the manager.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [30/03/2023] - [31/03/2023]

Test Results

IITK-Mess

OrdersComplaintsRebate ApprovalMess MenuExtrasAccess AccountLogout

Extras

Vada Pav

60

Add

IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Extras

Name:

Vada Pav

Price:

₹60/-

0

Order

Additional Comments: Extras updated by manager getting shown on each student's account.

4. Bill : Tests related to seeing bill from resident to manager and generating bill from manager to resident

Module Details: module containing tests for whether a manager can generate bills and whether residents can view bills from the manager.

Test Owner: Mansi Singh and Prapti Dagli

Test Date:[30/03/2023] - [31/03/2023]

Test Results:

IITK-Mess

OrdersComplaintsRebate ApprovalMess MenuExtrasAccess AccountLogout

Generate bill

Starting date

01-04-2023

Ending Date

30-04-2023

Daily Cost

78

Submit

Update dues

ITK-Mess

[Home](#) [Orders](#) [Complain](#) [Apply For Rebate](#) [Mess Menu](#) [Extras](#) [Mess-Bill](#) [Logout](#)

Bills

| | | | |
|----------------|---------------|--------------|----------------|
| From: | April 1, 2023 | To: | April 30, 2023 |
| Working Days: | 29 | | |
| X Rebate Days: | 4 | | |
| Daily Cost: | ₹78/- | Extras Cost: | ₹0/- |
| Total: | ₹1950/- | | |

Additional Comments: Manager is easily able to update the monthly bill on each student's account .

5. Extras: Tests related to extras from the extras section to the home section and the orders section of the resident's interface.

Module Details: module containing tests for whether a resident can book extras and see the price of total extras in home and see the name of the extras with price in orders.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [30/03/2023] - [31/03/2023]

Test Results:

IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Extras

Name:

Vada Pav

Price:

₹60/-

1

Order

IITK-Mess

HomeOrdersComplainApply For RebateMess MenuExtrasMess-BillLogout

Name

:

Mansi Singh

RollNo

:

100010

Extras

:

₹60/-

Dues

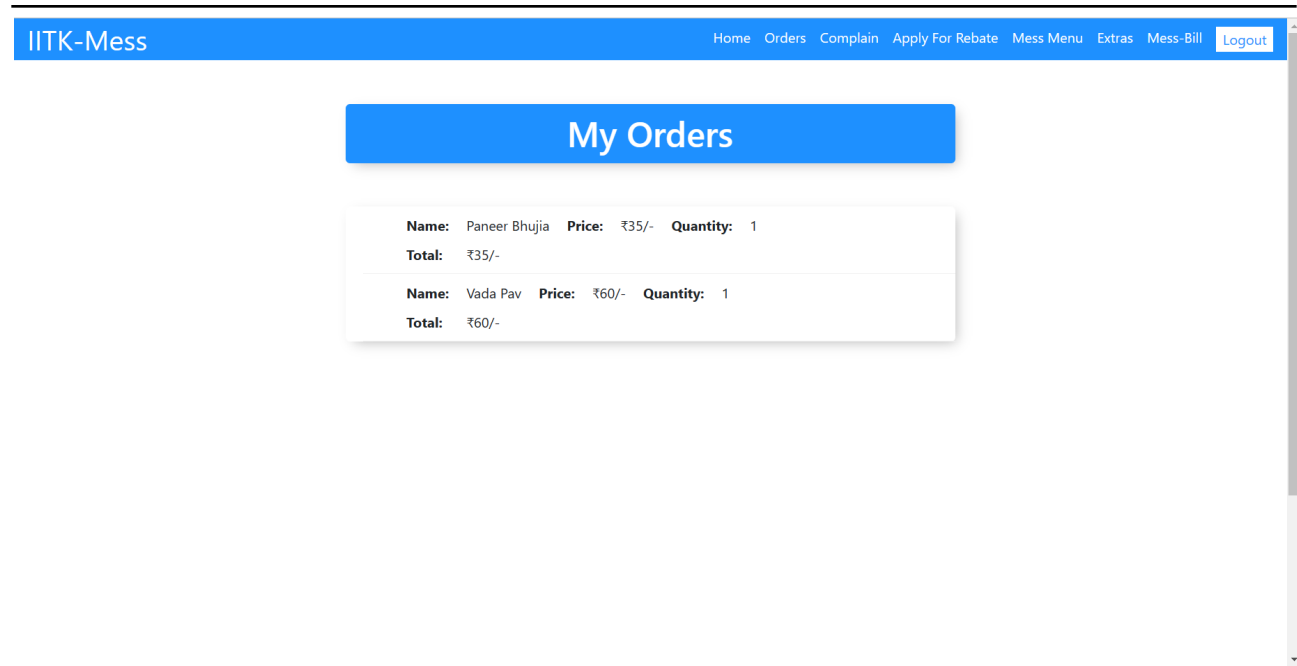
:

₹1950/-

Rebate Days

:

0



Additional Comments: Order placed by a student is getting shown on the order page and total price of order also updating on student's home page.

6. Dues: Tests related to viewing dues from resident to manager and dues paid from manager to resident

Module Details: module containing tests for whether a manager can update paid dues of residents and whether residents can view their dues.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [30/03/2023] - [31/03/2023]

Test Results:

Starting date

dd-mm-yyyy

Ending Date

dd-mm-yyyy

Daily Cost

Submit

Update dues

100010

1950

Update

IITK-Mess

Home

Orders

Complain

Apply For Rebate

Mess Menu

Extras

Mess-Bill

Logout

Name

:

Mansi Singh

RollNo

:

100010

Extras

:

₹0/-

Dues

:

₹1950/-

Rebate Days

:

0

| | | |
|-------------|---|-------------|
| Name | : | Mansi Singh |
| RollNo | : | 100010 |
| Extras | : | ₹60/- |
| Dues | : | ₹0/- |
| Rebate Days | : | 0 |

Additional Comments: Manager can easily update the dues of a student.

• System Testing

1. Requirement: login

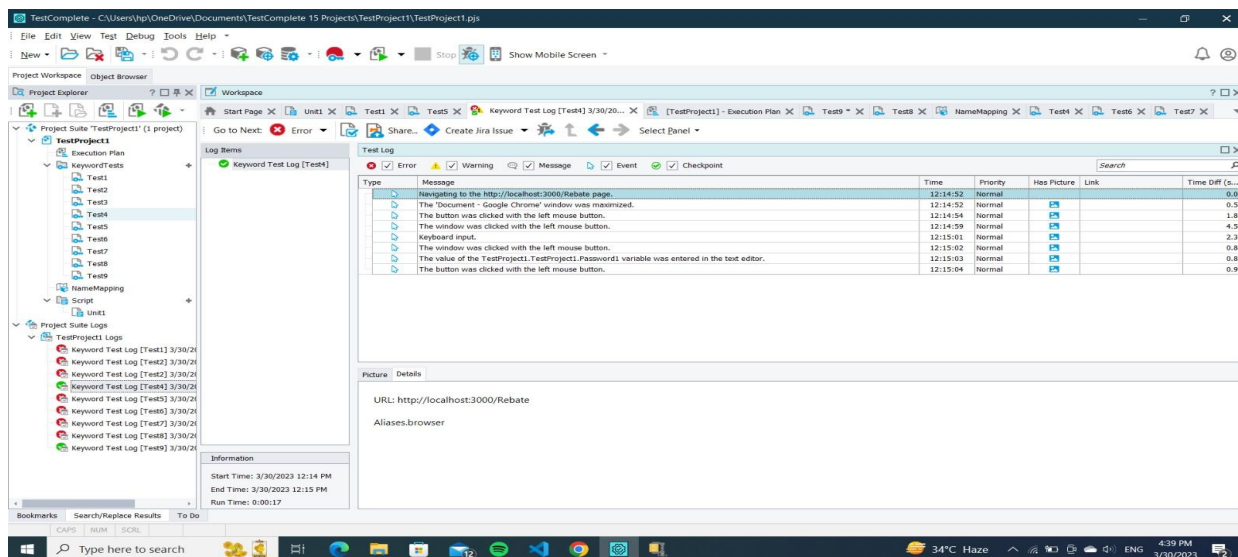
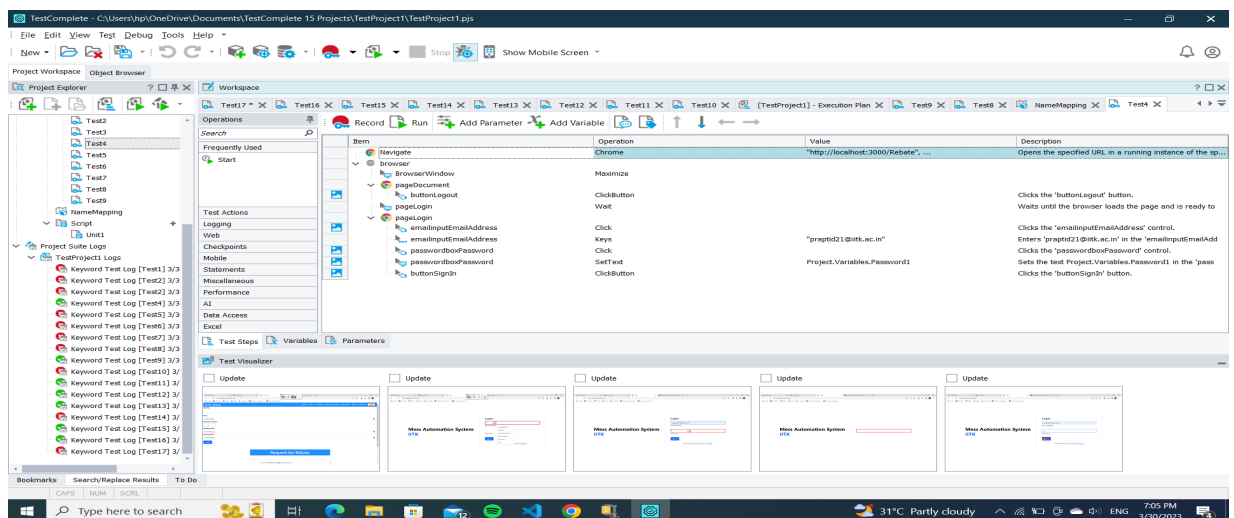
Test was conducted for verifying the account creation and login function , i.e user is logged in if the email id and password are matched , and the run time is reported.

Test Owner: Sawan H N

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the tests were successful
- Run time:0.17 s



2. Requirement:Apply for rebate

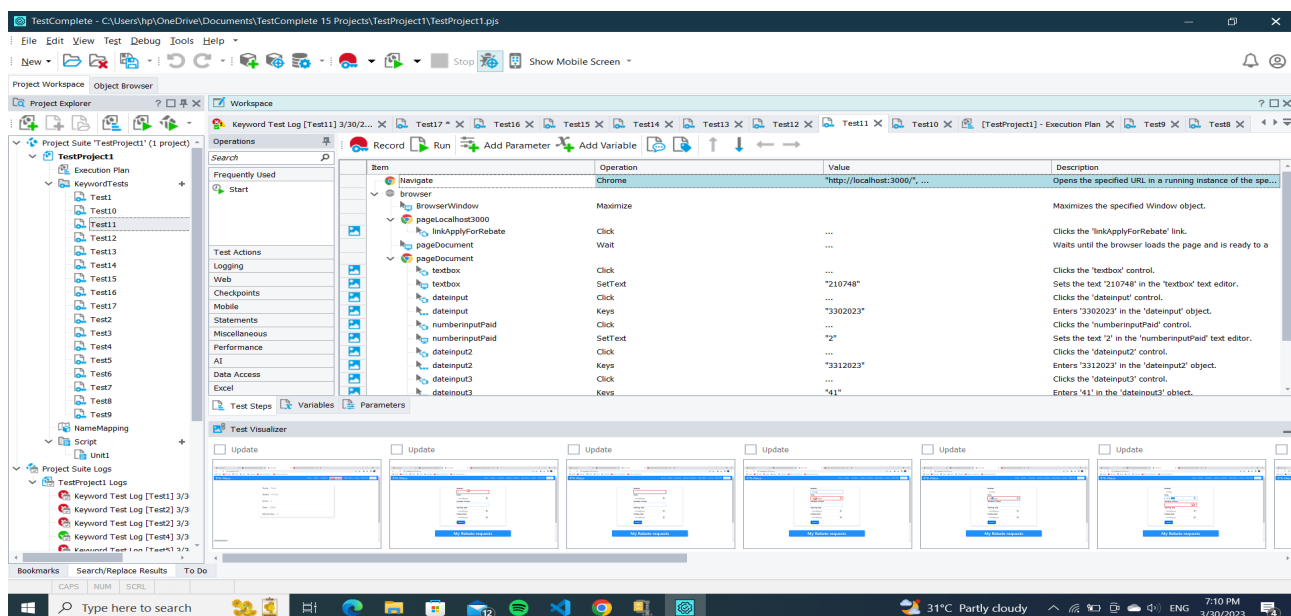
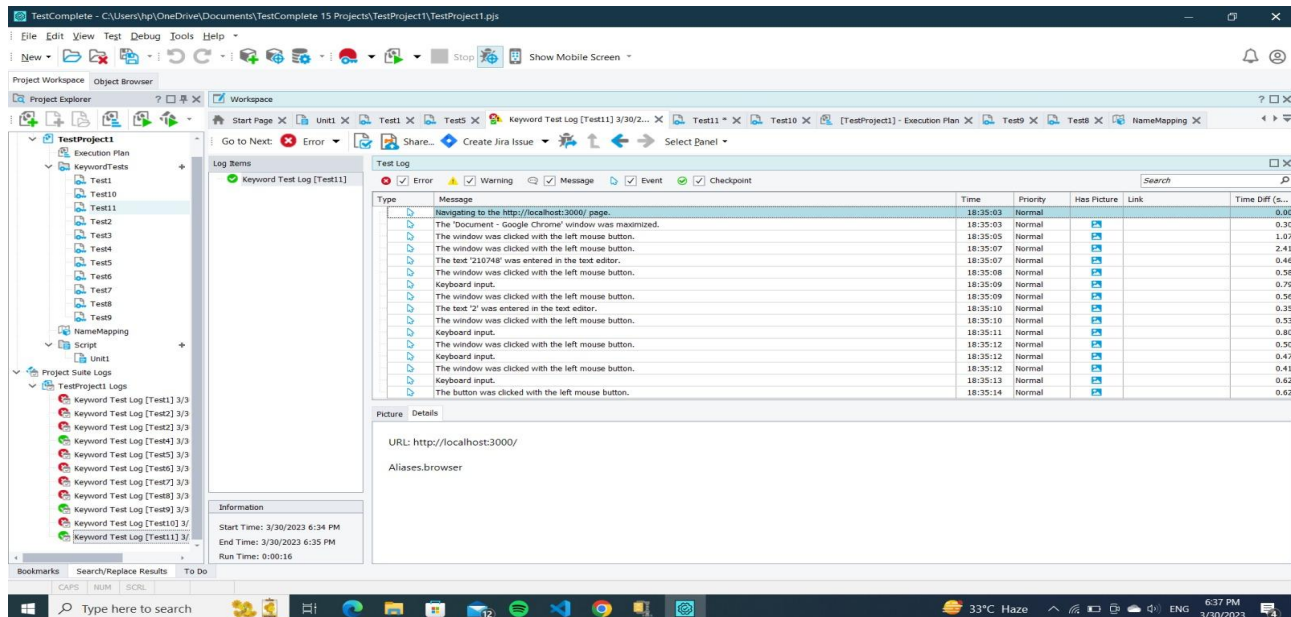
Test was conducted to check the rebate application feature , i.e students can apply for rebate by filling start date and end date , after approval from manager his request will show up under my requests, and the run time for application submission was reported.

Test Owner: Ashutosh Agrawal

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the test cases passed
- Run time:0.16 s



3. Requirement:order extras

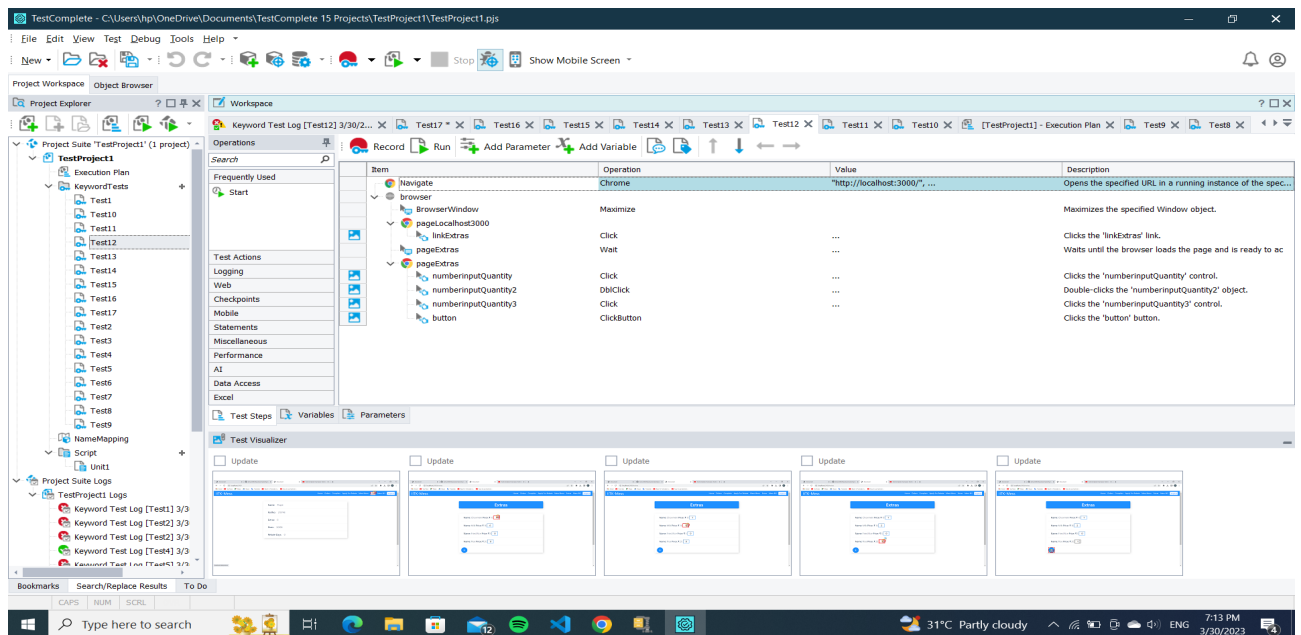
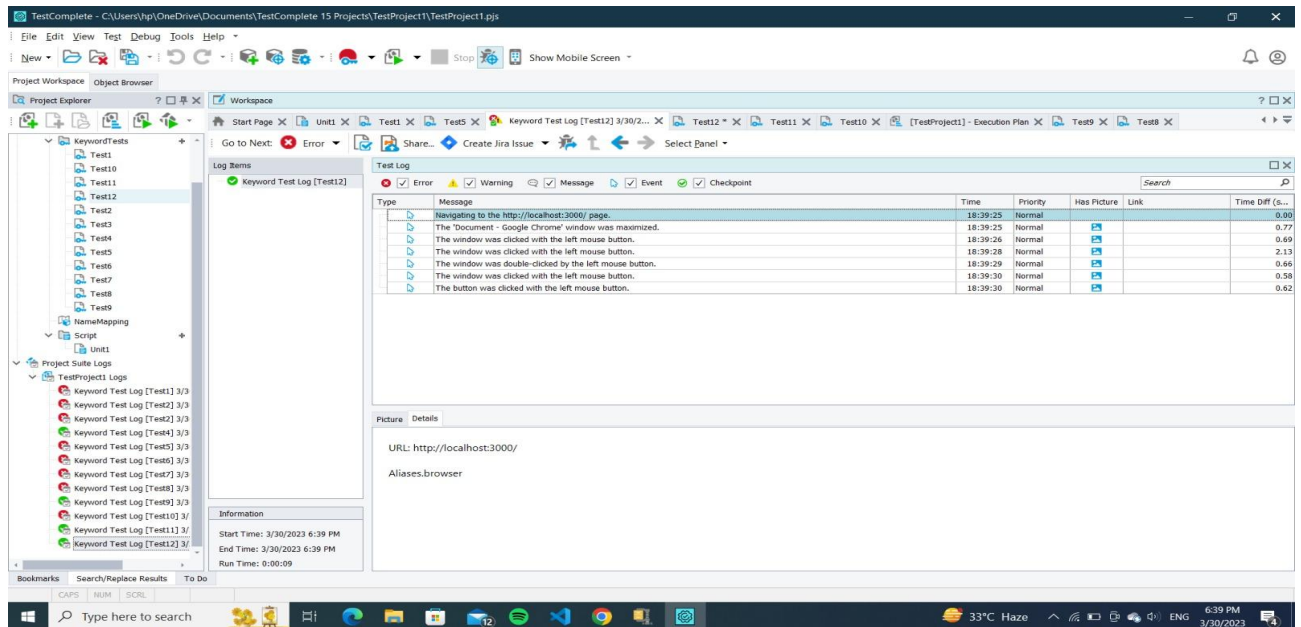
Test was conducted to check extras booking features , i.e students can choose the quantity of desired items from the list of items available and order them, and runtime for this process was reported.

Test Owner: Charugundla Chethan

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the test cases passed
- Run time:0.09 s



4. Requirement: viewing of complaints and replying (manager interface)

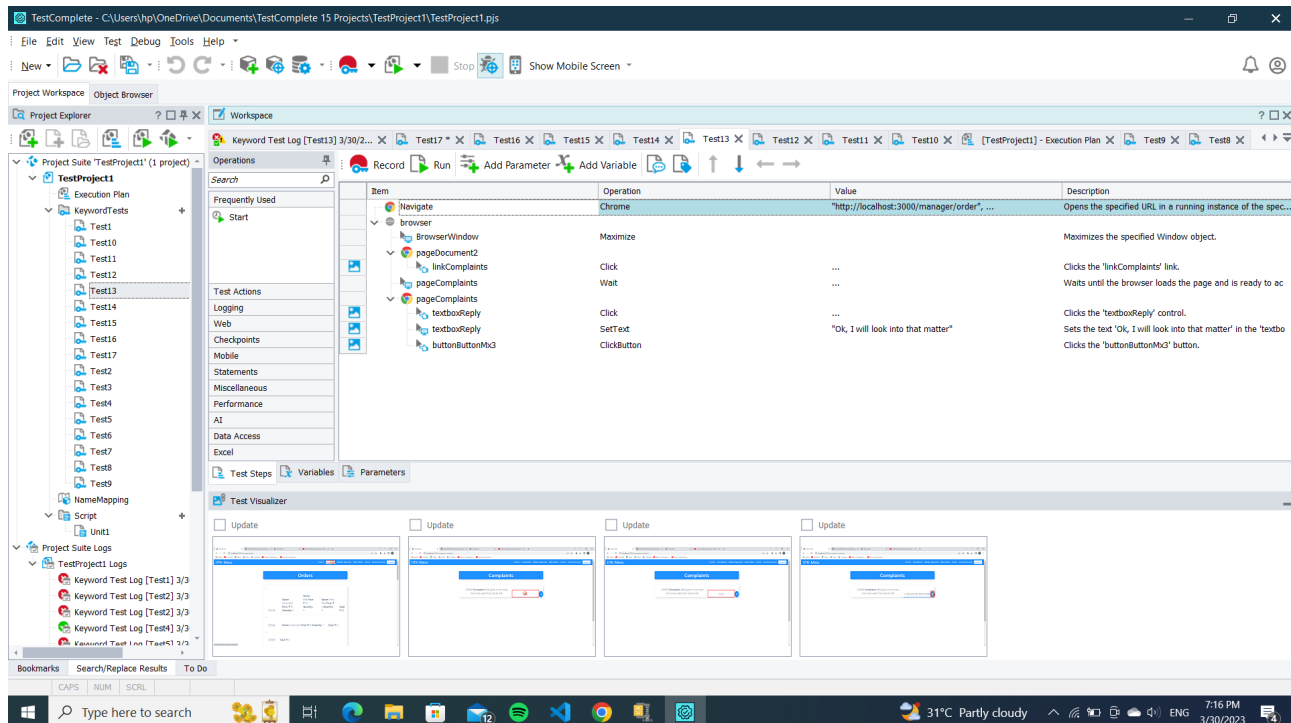
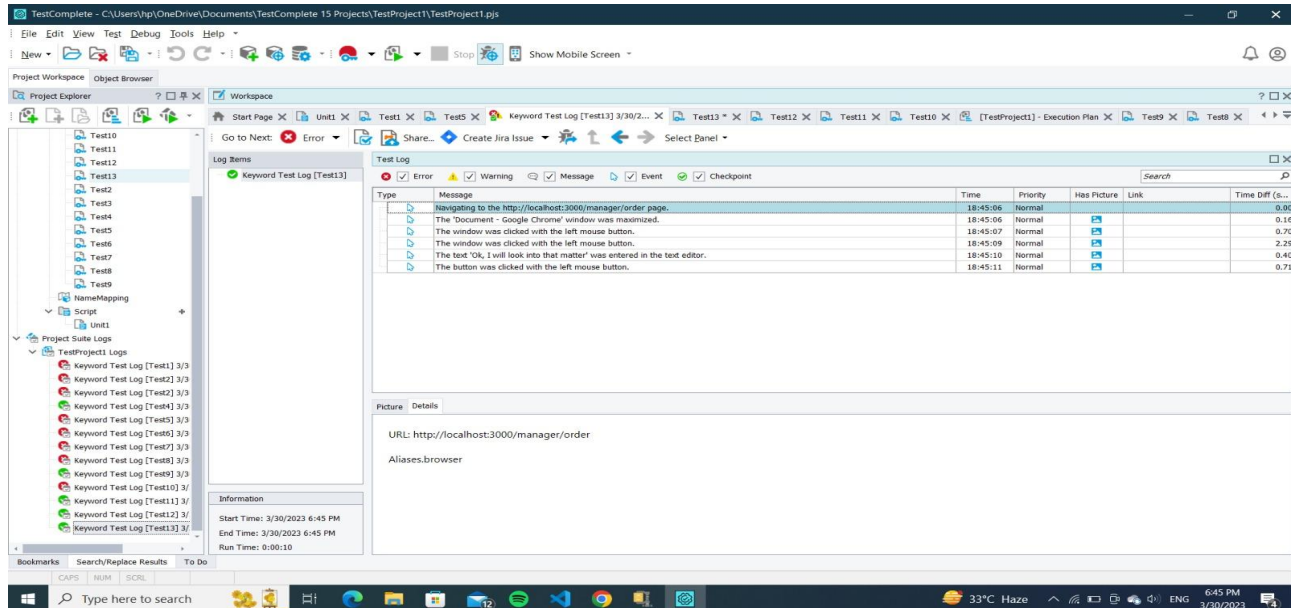
Test was conducted to verify replying for complaints feature, i.e manager can view and give reply for complaints of students. and the runtime for reply submission is reported.

Test Owner: Mokshagna Prattipati

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the test cases were passed
- Run time: 0.10 s



5. Requirement: updating list of items available(manager's interface)

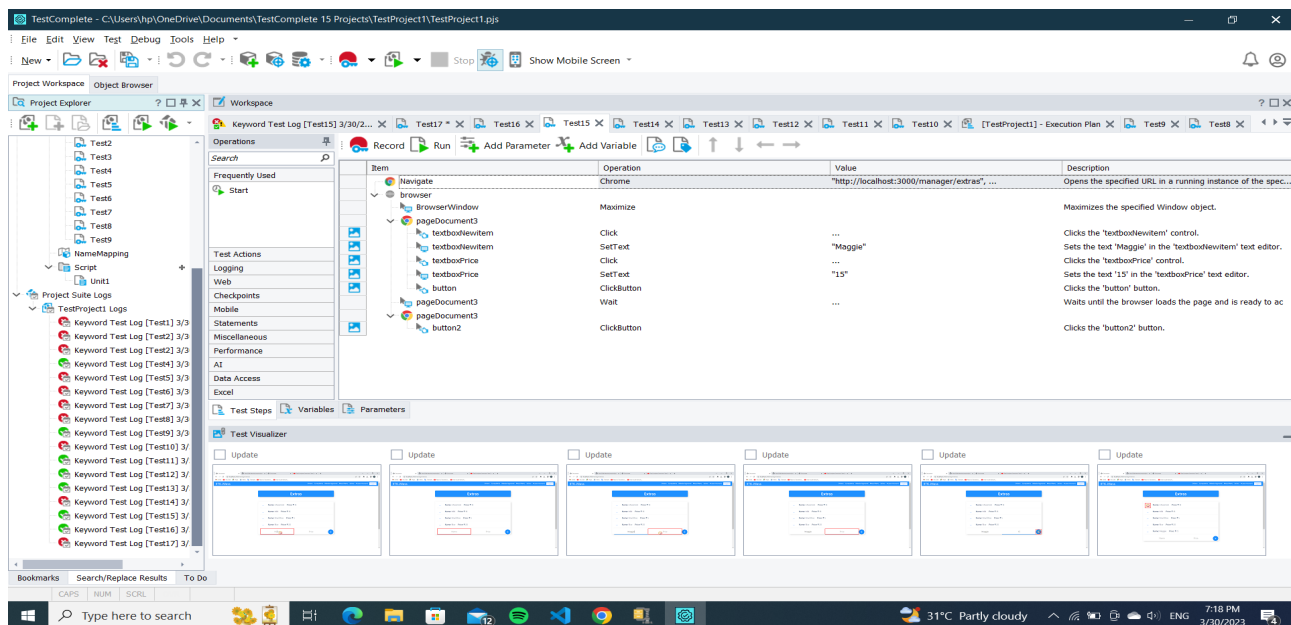
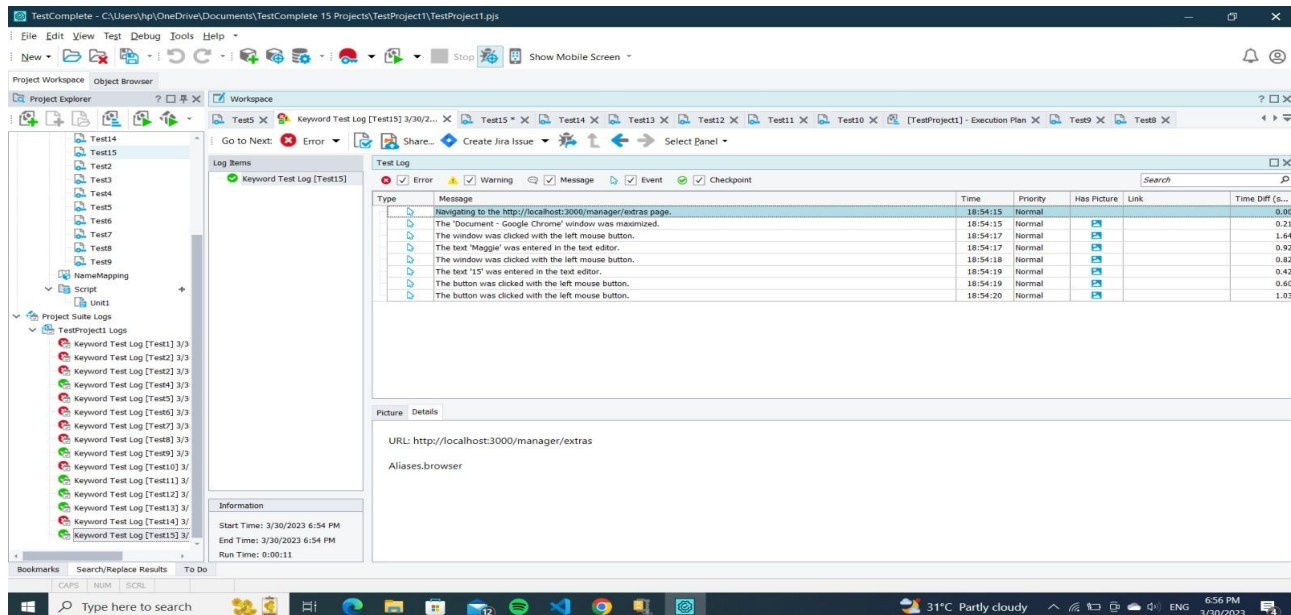
Test was conducted to verify the item updation feature for manager, i.e manager should be able to add or remove the list of items available for students to buy, and the changes should get reflected at students end, the run time for the addition of an item is reported.

Test Owner: Mansi Singh and Prapti Dagli

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- all the test cases were successful
- Run time:0.11 s



6. Requirement: updatation of mess bill (manager interface)

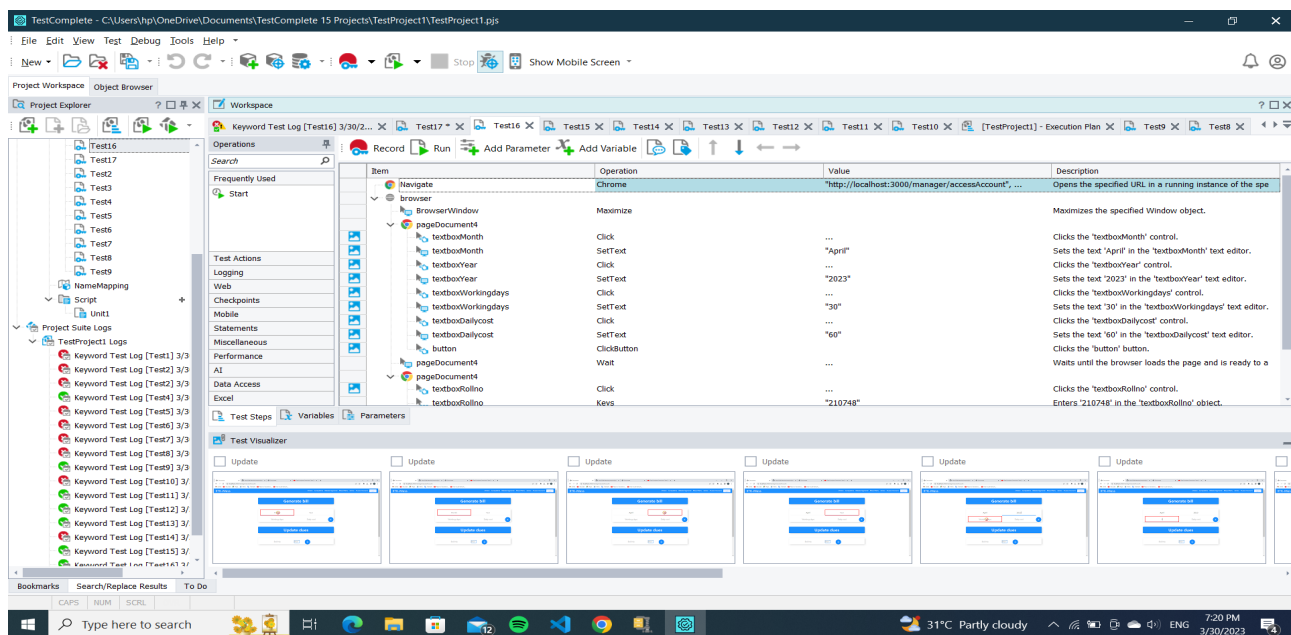
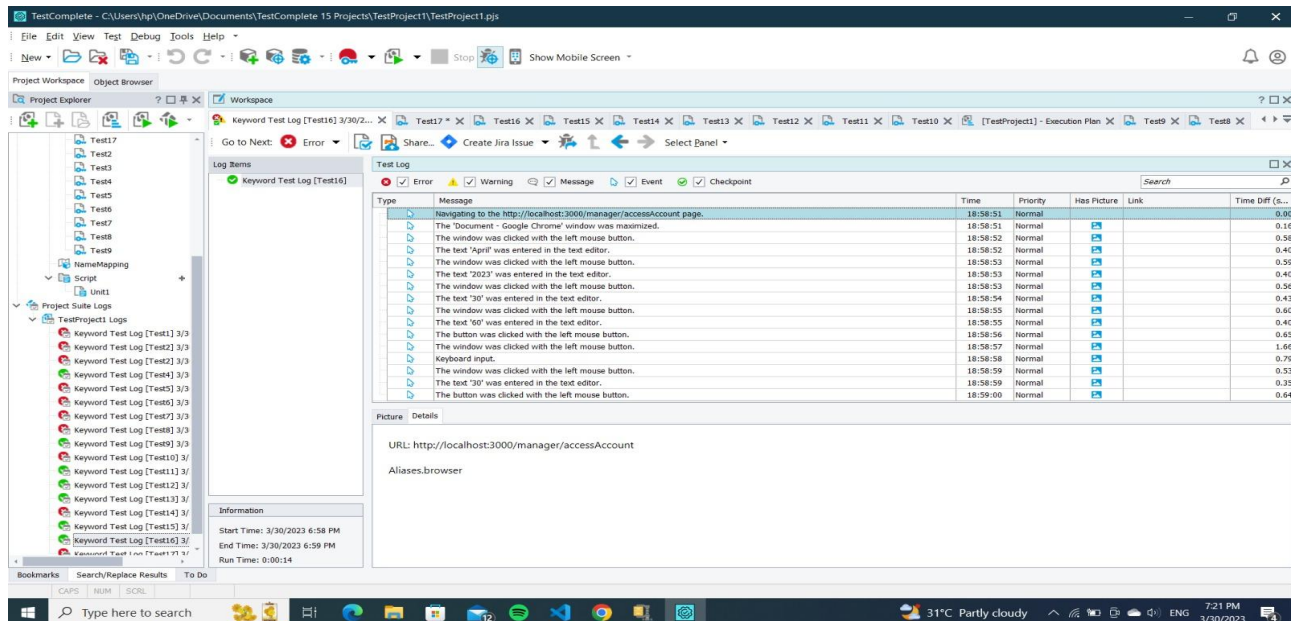
Test was conducted to verify the mess bill updatation feature for the manager, i.e manager can update bills of individual students, and runtime for this process was reported.

Test Owner: Archisha Singh

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the test cases were passed
- Run time: 0.14 s



7. Requirement: logging of complaint by student

Test was conducted to verify complaint logging feature , i.e student can log complaint .and the runtime for complaint submission is reported .

Test Owner: Sanjay Kumar

Test Date: [01/04/2023]-[02/04/2023]

Test Results:

- All the test cases were passed
- Run time: 0.04 s

The screenshot displays a test execution tool interface. On the left, the 'Project Explorer' shows a project named 'Mess' with a tree structure including 'Execution Plan', 'KeywordTests' (containing Test1, Test2, Test3, Test4), 'NameMapping', 'Script' (containing Unit1), and 'Project Suite Logs' (containing 'Mess Logs' with three 'Keyword Test Log' entries for Test2, Test3, and Test4). The main area is divided into two panes. The top pane, titled 'Test Log', shows a table of test results for 'Keyword Test Log [Test4]'. The table has columns for Type, Message, Time, Priority, Has Picture, Link, and Time Diff (s...). The bottom pane, titled 'Actual Image', shows a screenshot of the application interface with a 'My Complaints' button and a message box.

| Type | Message | Time | Priority | Has Picture | Link | Time Diff (s...) |
|---------|---|----------|----------|-------------|------|------------------|
| Message | Navigating to the http://localhost:3000/Complain page. | 18:11:42 | Normal | | | 0.00 |
| | The 'Document and 3 more pages - Personal - Microsoft Edge' window was maximized. | 18:11:42 | Normal | | | 0.14 |

Information
Start Time: 30-03-2023 18:11
End Time: 30-03-2023 18:11
Run Time: 0:00:04

● Conclusion

How Effective and exhaustive was the testing?

Most of the unit tests had 100% decision coverage and 100% branch coverage. Integration tests covered some major features such as rebate, complaint, mess bill, etc . Stress testing (a type of testing that is so harsh, it is expected to push the program to failure) was done at multiple concurrency levels and thread counts.

Which components have not been tested adequately?

Automation Testing was very difficult in Unit and Integration Testing. So, we tested them manually. It might be possible that they aren't tested adequately.

What difficulties have you faced during testing?

We faced difficulties in finding Software for System Testing and learning that software to do system testing effectively.

How could the testing process be improved?

Testing process could be improved by having good knowledge of how to do automated unit and integration testing effectively and by having even better code coverage. Some specific test suites must exist to cater our specific needs that can be looked into.

Appendix A - Group Log

- The group activities during testing were asynchronous, where we kept constant communication via our whatsapp group.
- Testing was completed on 1 Apr, 2023. The testing process was documented in parallel with the testing.
- The documentation was completed on 2 Apr, 2023 after coordinating with the unit, integration and system testers

