

American International University- Bangladesh

Software Quality and Testing Report

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Project Title: Testing Student Management system with Selenium IDE.

Overview: For our testing initiative, we employed a dedicated website crafted specifically for our testing objectives. We seamlessly incorporated the Selenium IDE extension into our browser to enhance efficiency during the testing process. Our methodology centered on meticulously executing tests in a systematic fashion to guarantee comprehensive coverage. Enclosed within this report are screenshots elucidating the integration process and delineating each step of the testing conducted on the website. These screenshots serve to meticulously document our testing methodology and furnish compelling visual evidence of our procedures and outcomes.

Testing Objectives: The principal aims of our testing procedure were as follows:

1. Validation of Functionality: To ascertain that all features and functionalities of the web-based program operate in accordance with the provided specifications.
2. Detection of Defects: To identify and meticulously document any deviations, errors, or incongruities in the program's performance, with the intention of enhancing its overall quality and dependability.

Additionally, our testing process aimed to ensure compatibility across various platforms and devices, including different web browsers and operating systems. This encompassed conducting tests on popular browsers such as Chrome, Firefox, Safari, and Edge, as well as assessing the program's responsiveness on desktops, laptops, tablets, and mobile devices. By verifying consistent functionality and user experience across diverse environments, we strived to guarantee a seamless and accessible product for all end-users, regardless of their chosen platform or device. By concentrating on these objectives, our intention was to evaluate the program's efficacy, reliability, and user-centric attributes, with the ultimate goal of delivering a superior-quality product to end-users.

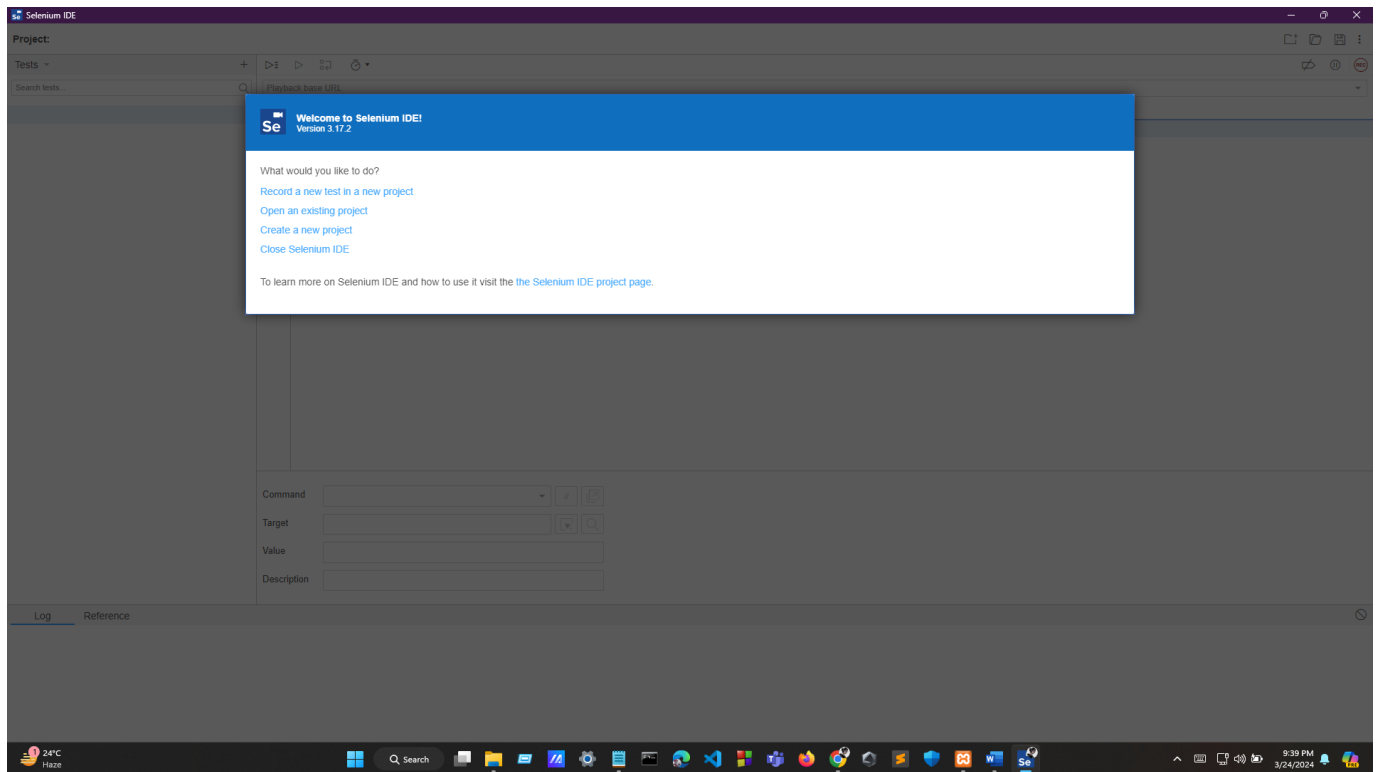
Tools Used: For our testing endeavors, we exclusively utilized Selenium as our core testing tool. Integrated seamlessly with our browser through the Selenium IDE extension, Selenium facilitated efficient test automation and comprehensive validation of the web-based program's functionality.

The screenshot displays the Selenium IDE extension page on the Chrome Web Store. The page features the Selenium IDE logo, the SeleniumHQ logo, and a 'Remove from Chrome' button. Below the extension name, it shows the SeleniumHQ logo, a 'Featured' badge, a 3.4 star rating from 256 reviews, and categories 'Extension' and 'Developer Tools' with 800,000 users. The main content area shows a preview of the Selenium IDE interface, which includes a 'Tests' tab, a 'Commands' list, and a 'Target' field. The 'Commands' list contains the following items:

Command	Target	Value
1. open	/	22,13
2. click at	link=Projects	37,7
3. click at	xpath=//a[contains(text)='Selenium WebDriver']...	20,17
4. click at	link=Projects	88,11
5. click at	link=Selenium IDE	48,18
6. click at	link=Projects	79,9
7. click at	xpath=//a[contains(text)='Selenium Grid']...	

The 'Target' field is set to 'http://www.seleniumhq.org'. The 'Value' field is empty. The 'Commands' list is titled 'Selenium Projects*'. Below the preview, there is a section titled 'Overview'.

Ui Interface of Selenium IDE:



Test Environment:

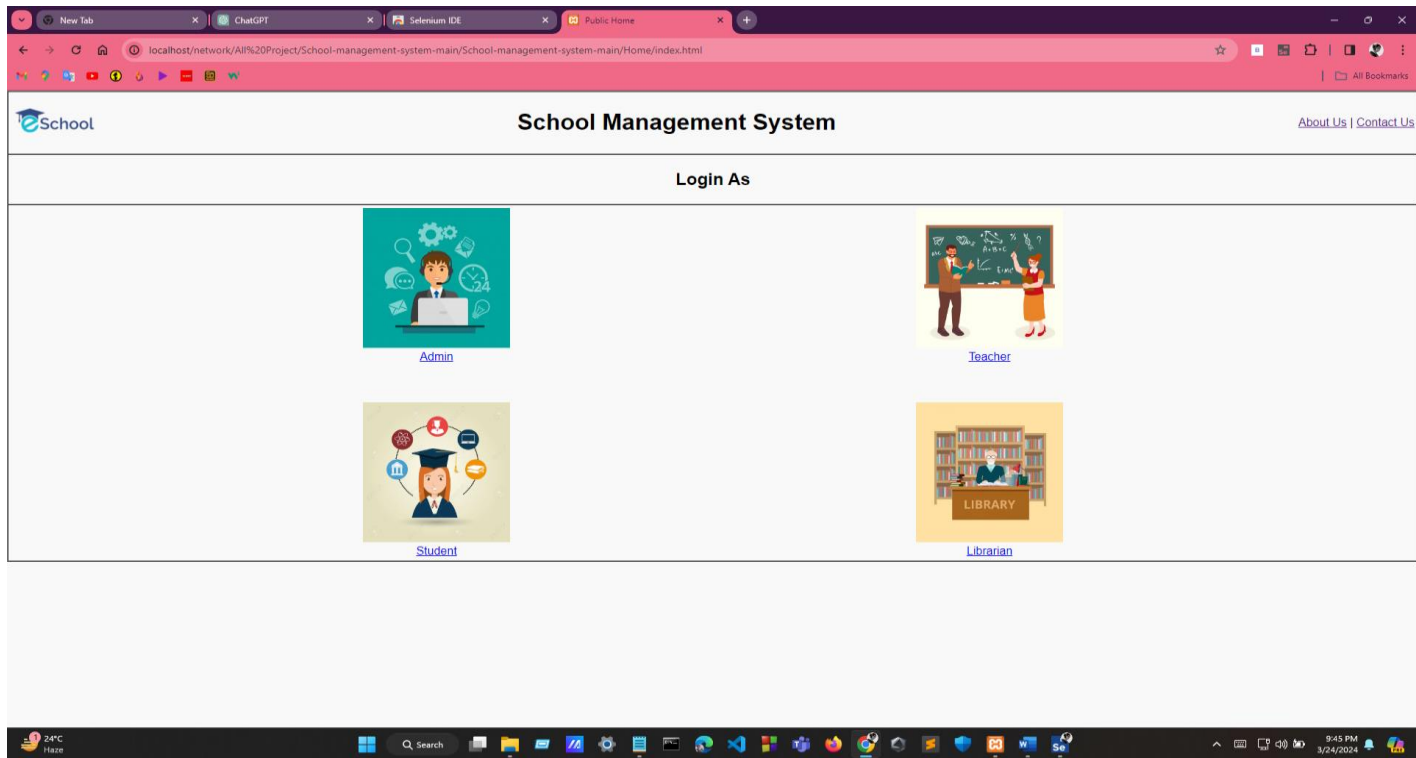
The testing was conducted in a controlled environment, utilizing the following specifications:

1. Operating System: Windows
2. Browser: Google Chrome
3. Selenium IDE Extension: Integrated into the Google Chrome browser.

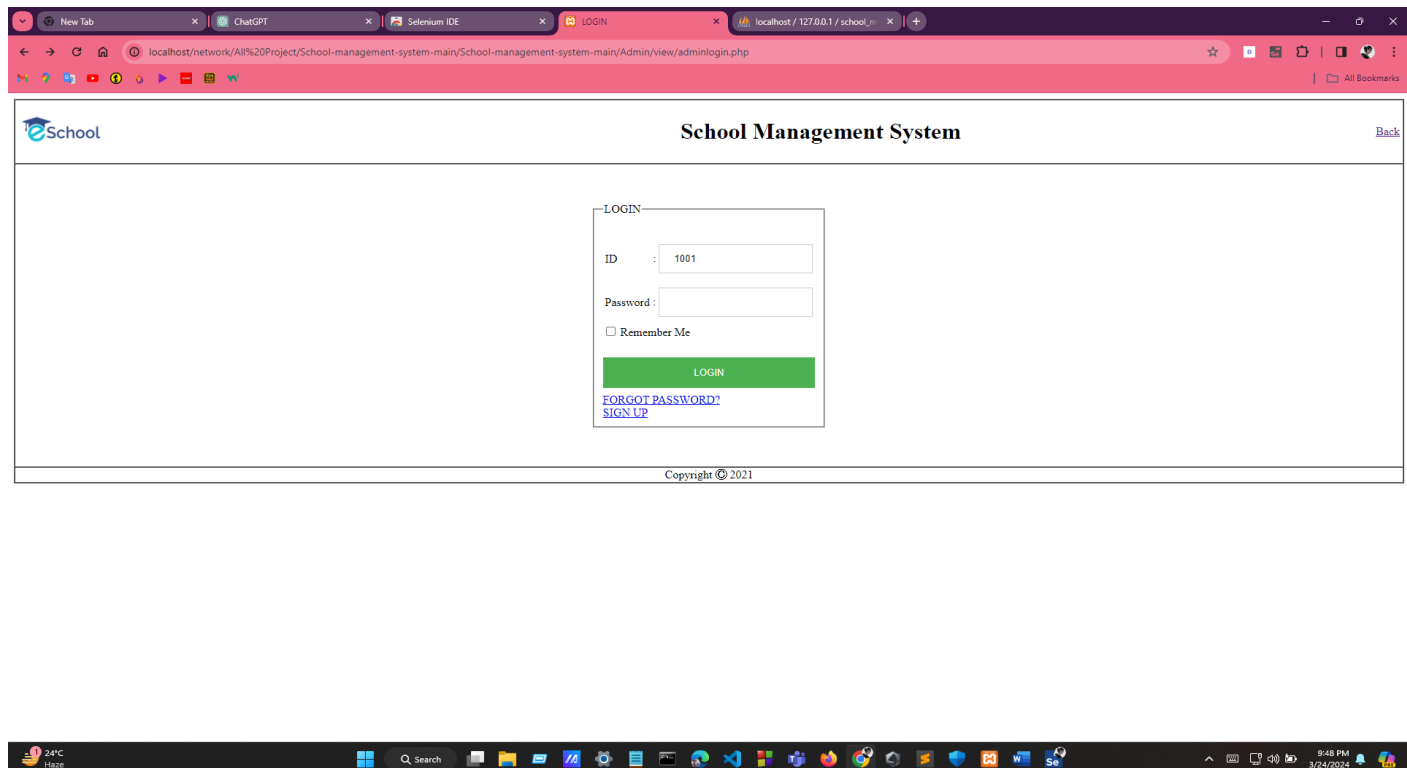
The establishment of this standardized environment ensured uniformity throughout the testing process, enabling us to meticulously evaluate the functionality of the web-based program across a spectrum of scenarios with precision and accuracy.

Test Results:

1. Login Test:



1.1 Admin Login Test:



Selenium IDE - SMS*

Project: SMS*

Tests +

Search tests...

http://localhost

Command	Target	Value
1 ✓ open	/network/API%20Project/School-management-system-main/School-management-system-main/AdminView/adminlogin.php	
2 ✓ set window size	1936x1048	
3 ✓ click	id=id	
4 ✓ type	id=id	1001
5 ✓ click	id=password	
6 ✓ type	id=password	1234567@
7 ✓ click	css=input:nth-child(3)	
8 ✓ click	id=submit	

Command

Target

Value

Description

Log Reference

- 3. click on id=id OK 21:51:36
- 4. type on id=id with value 1001 OK 21:51:37
- 5. click on id=password OK 21:51:37
- 6. type on id=password with value 1234567@ OK 21:51:38
- 7. click on css=input:nth-child(3) OK 21:51:39
- 8. click on id=submit OK 21:51:40

AdminLoginTest completed successfully 21:51:42

EUR/USD -0.51%

9:51 PM 3/24/2024

Explanation: We have tested the admin login operation using id and password. As you can see, the testing is successful.

1.2 Teacher Login Test:

New Tab ChatGPT Selenium IDE Public Home localhost / 127.0.0.1 / school_m

localhost/network/API%20Project/School-management-system-main/School-management-system-main/Teacher/View/LoginPage.php

School

Home Login Registration Back

LOGIN

ID:

Password:

Submit Sign Up

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Selenium IDE - SMS

Project: SMS

Tests: +

Search tests...

http://localhost

Command	Target	Value
1. ✓ open	/network/All%20Project/School-management-system-main/School-management-system-main/Teacher/ViewLoginPage.php	
2. ✓ set window size	1936x1048	
3. ✓ click	id=id	
4. ✓ type	id=id	2001
5. ✓ type	id=password	4567
6. ✓ send keys	id=password	\$(KEY_ENTER)

Command:

Target:

Value:

Description:

Log Reference

Log	Reference
1. open on /network/All%20Project/School-management-system-main/School-management-system-main/Teacher/ViewLoginPage.php OK	21:57:45
2. setWindowSize on 1936x1048 OK	21:57:45
3. click on id=id OK	21:57:46
4. type on id=id with value 2001 OK	21:57:47
5. type on id=password with value 4567 OK	21:57:47
6. sendKeys on id=password with value \$(KEY_ENTER) OK	21:57:48
TeacherLoginTest completed successfully	

24°C Haze

Search

10:08 PM 3/24/2024

Explanation: We have tested the teacher login operation using id and password. As you can see, the testing is successful.

1.3 Student Login Test:

New Tab | ChatGPT | Selenium IDE | Login | localhost / 127.0.0.1 / school... | (1748) New Selenium IDE is he... | OrangeHRM

localhost/network/All%20Project/School-management-system-main/School-management-system-main/student/view/login.php

School Management System

Back

LOGIN

ID:

Password:

☐ Remember Me

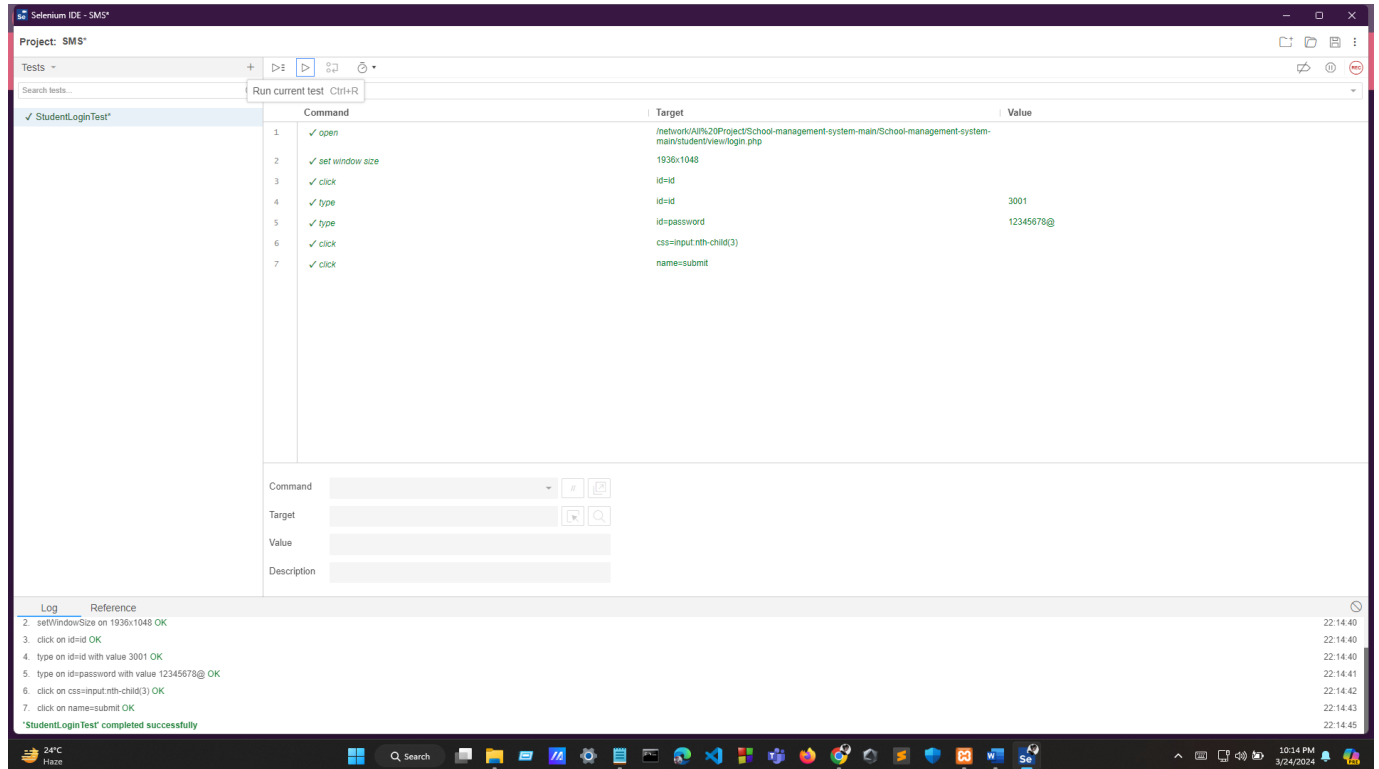
[Sign Up](#)

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24°C Haze

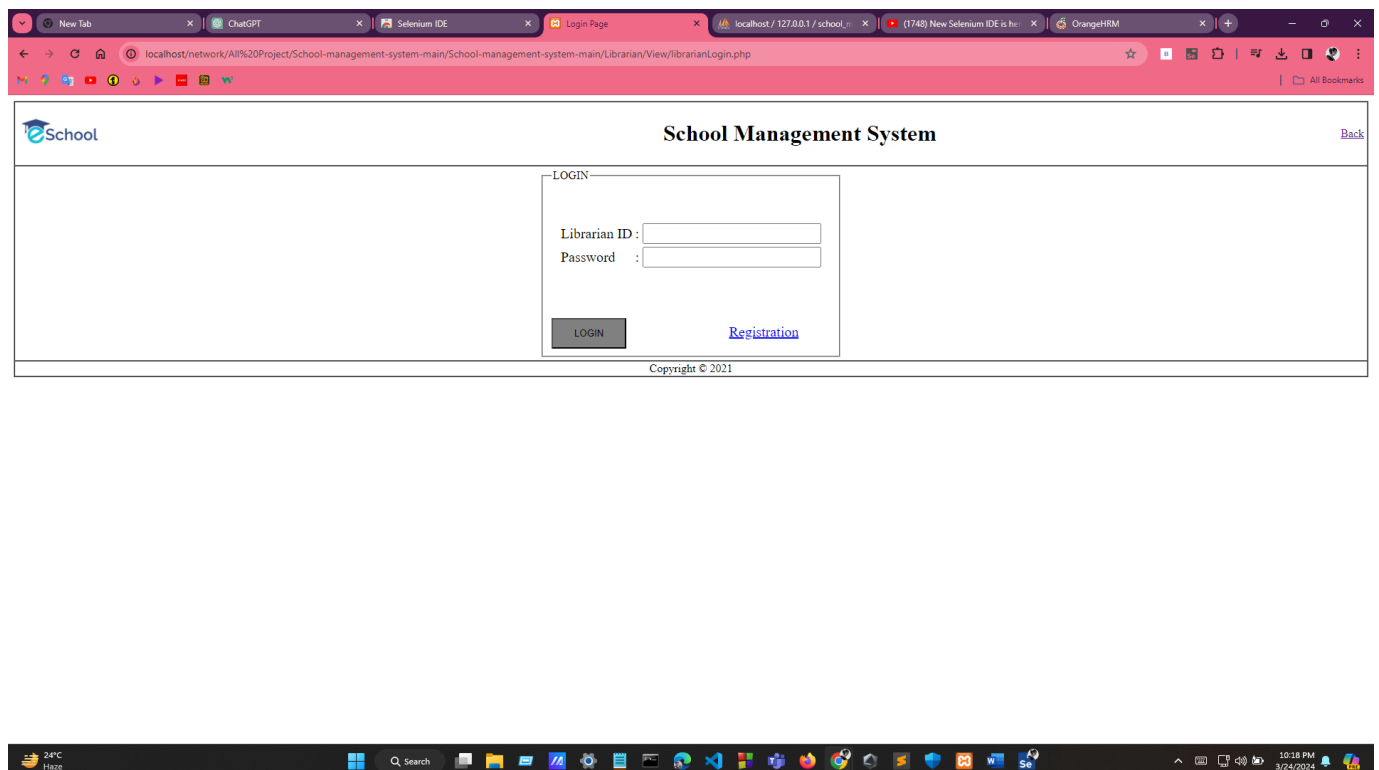
Search

10:11 PM 3/24/2024



Explanation: We have tested the student login operation using id and password. As you can see, the testing is successful.

1.4 Librarian Login Test:



Selenium IDE - SMS*

Project: SMS*

Tests +

Search tests...

LibrarianLoginTest*

Command	Target	Value
1 ✓ open	/network/All%20Project/School-management-system-main/School-management-system-main/LibrarianView/librarian_login.php	
2 ✓ set window size	1936x1048	
3 ✓ click	id=librarianid	
4 ✓ type	id=librarianid	7001
5 ✓ type	id=password	123
6 ✓ send keys	id=password	\$(KEY_ENTER)

Command

Target

Value

Description

Log Reference

- 1. open on /network/All%20Project/School-management-system-main/School-management-system-main/LibrarianView/librarian_login.php OK 22:17:43
- 2. setWindowSize on 1936x1048 OK 22:17:43
- 3. click on id=librarianid OK 22:17:44
- 4. type on id=librarianid with value 7001 OK 22:17:44
- 5. type on id=password with value 123 OK 22:17:45
- 6. sendKeys on id=password with value \$(KEY_ENTER) OK 22:17:46

LibrarianLoginTest completed successfully 22:17:48

24°C
Haze

10:17 PM
3/24/2024

Explanation: We have tested the librarian login operation using id and password. As you can see, the testing is successful.

2. Admin adding teacher, student View Test:

Teacher adding:

The screenshot shows a web browser window with the URL `localhost/network/All%20Project/School-management-system-main/School-management-system-main/Admin/view/addTeacher.php`. The page title is "School Management System". On the left, there is a sidebar with the following links: "Login As Anirban Saha (Admin)", "Add Teacher", "View Teacher", "Dashboard", and "Logout". The main content area is titled "REGISTRATION" and contains a form with the following fields: "Name" (text input), "Email" (text input), "Mobile No" (text input), "Id" (text input), "Password" (text input), "Confirm Password" (text input), "Gender" (radio buttons for Male, Female, Other), "Date of Birth" (date picker), and "Subject" (dropdown menu). The "Subject" dropdown is currently set to "Bangla". At the bottom of the form are "Submit" and "Reset" buttons. The footer of the page says "Copyright © 2021".



The screenshot shows the Selenium IDE interface with the project name "SMS". The test case "Teacher add" is running. The test steps are as follows:

Command	Target	Value
set window size	1936x1048	
click	id=name	
type	id=name	MD MOSTOFA HASIB
type	id=email	hasib@gmail.com
type	id=mobile	01747496866
type	id=id	1010
type	id=password	12345678@
click	id=password	
type	id=repass	12345678@
click	id=gender	
click	id=gender	
click	id=dob	
type	id=dob	2000-06-30
click	id=subject	
select	id=subject	label=Bangladesh and global studies
click	id=submit	
assert alert	User added Successfully!	

The test case failed at step 18, "assert alert", with the message "No response!!". The log shows the following details:

Log	Reference
14. type on id=dob with value 2000-06-30 OK	22:24:38
15. click on id=subject OK	22:24:39
16. select on id=subject with value label=Bangladesh and global studies OK	22:24:40
17. click on id=submit OK	22:24:41
18. assertAlert on User added Successfully! Failed: No response!!	22:24:42

The test case ended with 1 error(s).

Explanation: We tested whether the teacher has been added or not. Teacher added in the database but an error occurs in the assertAlert on User added Successfully! Failed:22:24:42 No response!!!!

Student adding:

School Management System Back | Logout

REGISTRATION

Login As
Anirban Saha
(Admin)

Add Student
View Student
Edit Request
Dashboard
Logout

Name:

Email:

Mobile No:

Id:

Password:

Confirm Password:

Gender: ☐ Male ☐ Female ☐ Other

Date of Birth:

Present Address:

Class:

Section:

Roll No:

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Selenium IDE - SMS*

Project: SMS*

Executing -

X Student add*

http://localhost/network/AI%20Project/School-management-system-main/School-management-system-main/Admin/view/addStudent.php

Command	Target	Value
13 ✓ click	id=dob	
14 ✓ click	id=dob	
15 ✓ type	id=dob	2010-02-08
16 ✓ click	id=p_address	
17 ✓ type	id=p_address	DHAKA,BANGLADESH
18 ✓ click	id=classE	
19 ✓ select	id=classE	label=Eight
20 ✓ click	id=section	
21 ✓ select	id=section	label=B
22 ✓ click	id=roll	
23 ✓ type	id=roll	500
24 ✓ click	name=submit	
25 ✓ click	id=mobile	
26 ✓ type	id=mobile	01747496866
27 ✓ click	name=submit	
28 ✗ assert alert		Form Submitted Successfully!

Command:
Target:
Value:
Description:

Runs: 1 Failures: 1

Log Reference

24. click on name=submit OK
25. click on id=mobile OK
26. type on id=mobile with value 01747496866 OK
27. click on name=submit OK
28. assertAlert on Form Submitted Successfully! Failed:
No response!!!!
Student add ended with 1 error(s)

22:32:21
22:32:22
22:32:23
22:32:24
22:32:26
22:33:12

Explanation: We tested whether the student has been added or not. Teacher added in the database but an error occurs in the assertAlert on Submitted Successfully! Failed:22:24:42 No response!!!!

3. Search Student Test:

School Management System

Back | Logout

Login As
Anirban Saha
(Admin)

Student list

	Id	Name	Email	Mobile	Gender	DOB	Present Address	Class	Section	Roll	Action
Add Student	3001	anindo saha	anindo@gmail.com	01711811411	male	2006-02-02	Ullapara,Surajganj	Seven	B	25	Edit / Delete
View Student	3002	karim	karim@gmail.com	01758631248	male	2004-11-29	khulna	Eight	B	22	Edit / Delete
Edit Request	3004	Rahim ali	rahim@a.com	01745693625	male	2009-02-02	ullapara	Seven	B	55	Edit / Delete
Dashboard	3010	Nafiz	nafiz@gmail.com	01747496866	male	2010-02-08	DHAKA,BANGLADESH	Eight	B	500	Edit / Delete
Logout	4001	anik saha	anik@gmail.com	01756551234	male	2004-06-16	nikunja-2	Seven	B	24	Edit / Delete
	4003	Ella	ella@gmail.com	01776584213	female	2004-02-13	dhaka	Eight	B	19	Edit / Delete
	4004	Laura	l@gmail.com	01772541167	female	2003-09-11	khulna	Seven	B	65	Edit / Delete

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Selenium IDE - SMS*

Project: SMS*

Tests

Search tests...

Run current test Ctrl+R

Command	Target	Value
1. open	http://localhost/network/API%20Project/School-management-system-main/School-management-system-main/Admin/view/viewStudent.php	
2. set window size	1936x1048	
3. click	id=name	
4. type	id=name	3010
5. click	css=input:nth-child(3)	

Command

Target

Value

Description

Log

Reference

Running 'Student search'

1. open on http://localhost/network/API%20Project/School-management-system-main/School-management-system-main/Admin/view/viewStudent.php OK

2. setWindowSize on 1936x1048 OK

3. click on id=name OK

4. type on id=name with value 3010 OK

5. click on css=input:nth-child(3) OK

'Student search' completed successfully

Explanation: We have tested the search feature of the project. So, we searched for the student using student id. So, the test is successful here.

4. Notice posting Testing:

The screenshot shows a web browser window with the URL `localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/postNotice.php`. The page title is "School Management System". On the left, there is a sidebar with "Login As Anirban Saha (Admin)" and a "Notice View Notice" link. The main area is titled "Notice" and contains a text input field with the placeholder "Enter notice Here" and a green "POST" button. At the bottom, it says "Copyright © 2021".

The screenshot shows the Selenium IDE interface for a project named "SMS". The test suite "Notice post*" is selected. The test steps are as follows:

Command	Target	Value
open	http://localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/postNotice.php	
set window size	1936x1048	
click	id=notice	
type	id=notice	Today the class work is performed in class 10 is in 10 pm
click	name=submit	

The log shows the test run completed successfully at 22:40:05.

```
Log Reference
Running 'Notice post'
1. open on http://localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/postNotice.php OK 22:40:01
2. setWindowSize on 1936x1048 OK 22:40:02
3. click on id=notice OK 22:40:03
4. type on id=notice with value Today the class work is performed in class 10 is in 10 pm OK 22:40:03
5. click on name=submit OK 22:40:05
'Notice post' completed successfully 22:40:05
```

Explanation: We have tested the feature of posting notices. We gave values in necessary fields and clicked on submit button. The test is successful.

5. Create Course Testing:

The screenshot shows a web browser window with the URL `localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/addCourse.php`. The page title is "School Management System". On the left, there is a sidebar with "Login As Anirban Saha (Admin)" and "Create Course View Course". The main content area is titled "Create Course" and contains three input fields: "Course Name" (text), "Class" (dropdown menu with "Six" selected), and "Description" (text area). Below these fields are "Submit" and "Reset" buttons. The footer of the page says "Copyright © 2021".

The screenshot shows the Selenium IDE interface for a project named "SMS". The test script is titled "Create course*" and consists of the following steps:

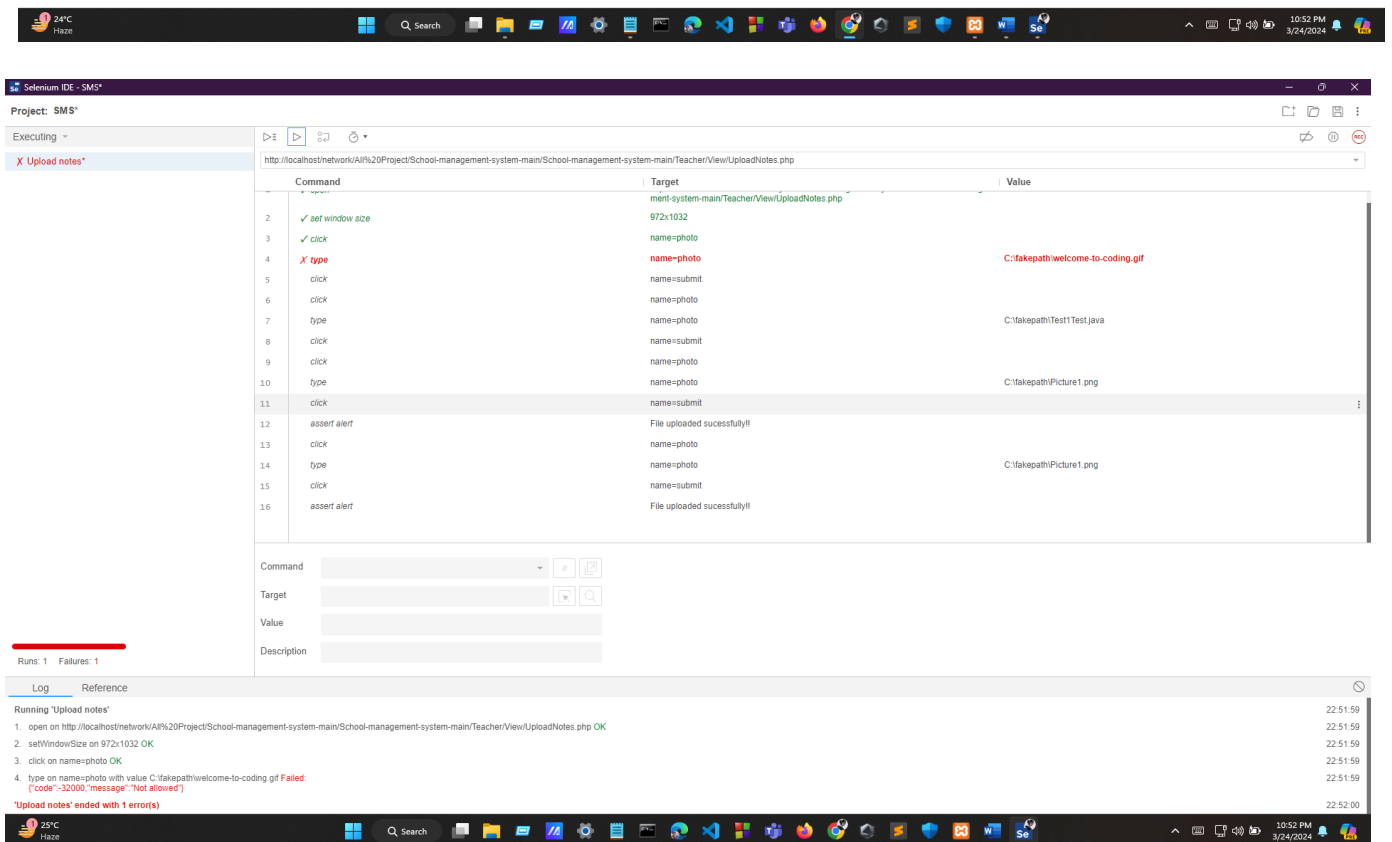
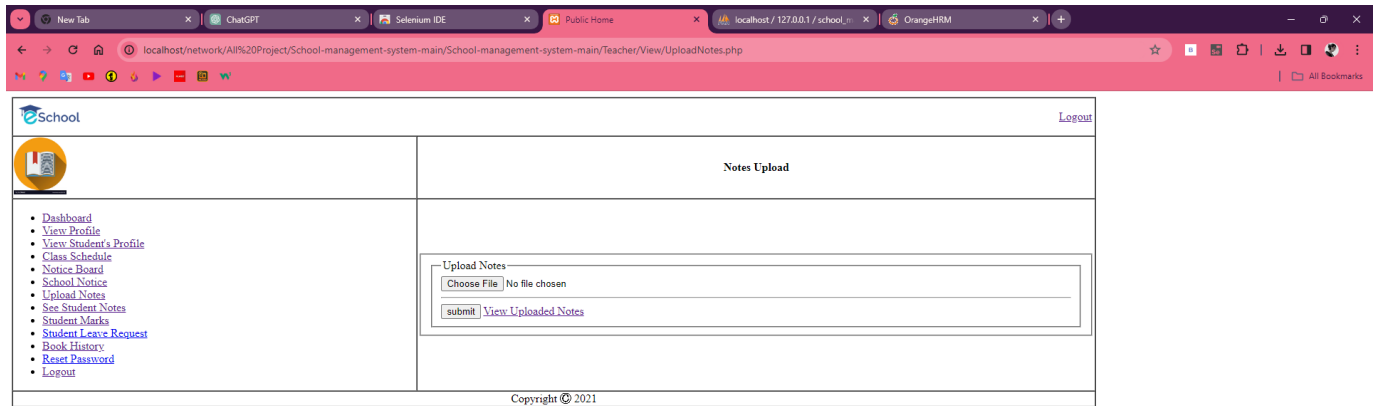
Step	Command	Target	Value
1	open	http://localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/addCourse.php	
2	set window size	1936x1048	
3	click	id=name	
4	type	id=name	ICT
5	click	id=classE	
6	select	id=classE	label=Ten
7	click	id=description	
8	type	id=description	ICT related topic are studying
9	click	name=submit	

The bottom of the interface shows the "Log" tab with the following entries:

- 4. type on id=name with value ICT OK
- 5. click on id=classE OK
- 6. select on id=classE with value label=Ten OK
- 7. click on id=description OK
- 8. type on id=description with value ICT related topic are studying OK
- 9. click on name=submit OK
- "Create course" completed successfully

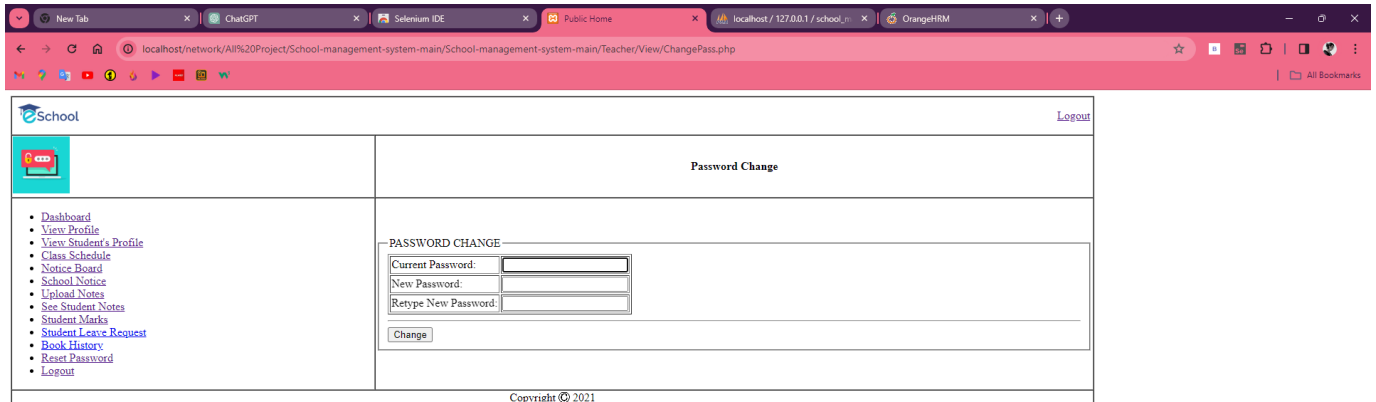
Explanation: We have tested the feature of create course. We gave values in necessary fields and clicked on submit button. The test is successful.

6. Upload notes Test:



Explanation: We tested the upload notes but an error occurred if wrong path was declared ,the error is `C:\fakepath\welcome-to-coding.gif`

7. Password change Test:



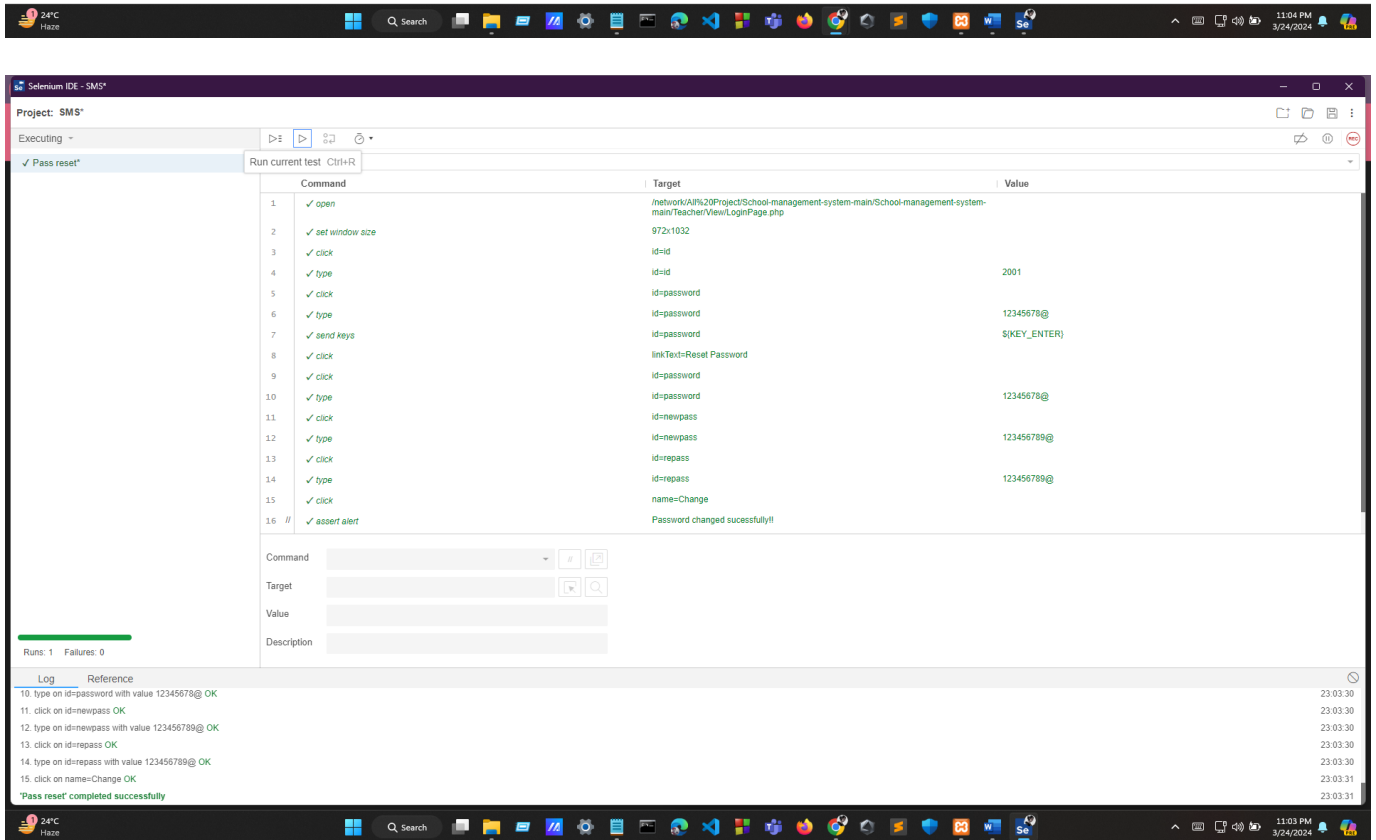
The screenshot shows a web browser window with the URL `localhost/network/AI%20Project/School-management-system-main/School-management-system-main/Teacher/View/ChangePass.php`. The page is titled "eSchool" and has a "Logout" link in the top right corner. The main content area is titled "Password Change" and contains a form with the following fields:

- Current Password:
- New Password:
- Retype New Password:
-

The sidebar on the left contains the following links:

- Dashboard
- View Profile
- View Student's Profile
- Class Schedule
- Notice Board
- School Notice
- Upload Notes
- See Student Notes
- Student Marks
- Student Leave Request
- Book History
- Reset Password
- Logout

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The screenshot shows the Selenium IDE interface with a project named "SMS". The test suite "Pass reset" is being executed. The table below lists the commands and their results.

Command	Target	Value
1. open	/network/AI%20Project/School-management-system-main/School-management-system-main/Teacher/View/LoginPage.php	
2. set window size	972x1032	
3. click	id=id	
4. type	id=id	2001
5. click	id=password	
6. type	id=password	12345678@
7. send keys	id=password	{KEY_ENTER}
8. click	linkText=Reset Password	
9. click	id=password	
10. type	id=password	12345678@
11. click	id=newpass	
12. type	id=newpass	123456789@
13. click	id=repass	
14. type	id=repass	123456789@
15. click	name=Change	
16. assert alert	Pass reset completed successfully	

Runs: 1 Failures: 0

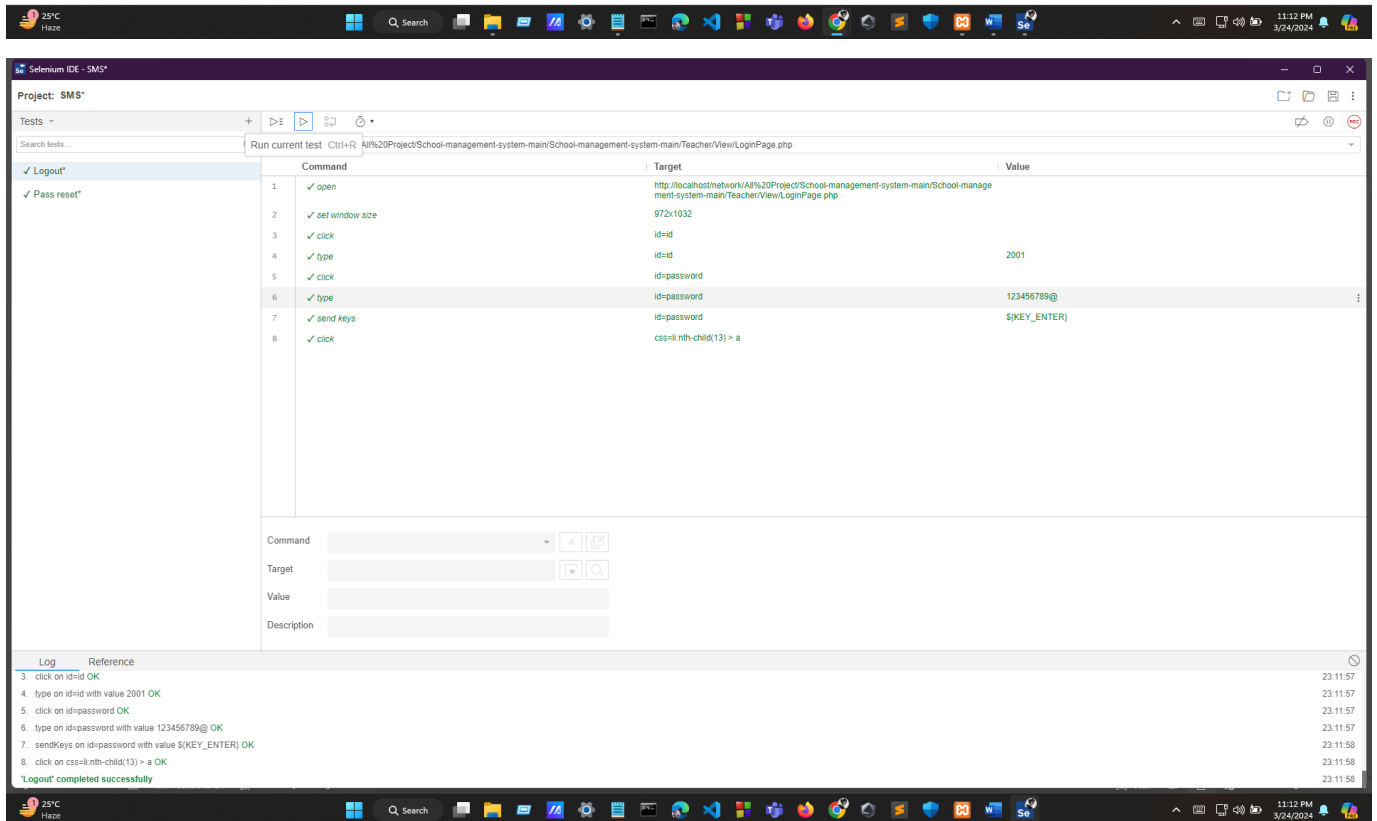
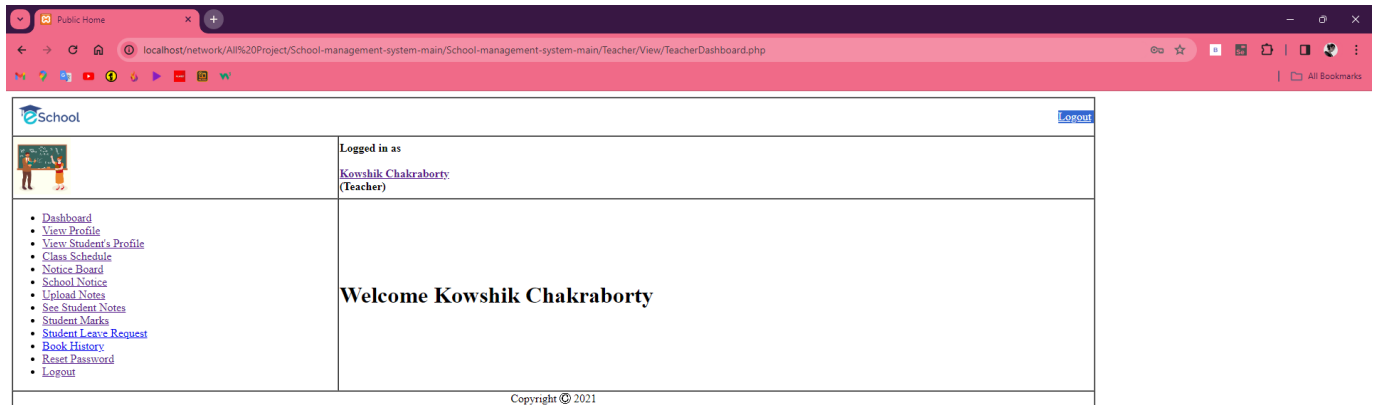
Log Reference

- 10. type on id=password with value 12345678@ OK
- 11. click on id=newpass OK
- 12. type on id=newpass with value 123456789@ OK
- 13. click on id=repass OK
- 14. type on id=repass with value 123456789@ OK
- 15. click on name=Change OK

Pass reset completed successfully

Explanation: We tested the password change feature of the project. Clicking the change button and it worked. So, it worked and the test is successful.

8. Log out Test:



Explanation: We test the log out test in the teacher dashboard after login we click the logout button. So, it worked and the test is successful.

9. Delete student Test:

The screenshot shows a web browser window displaying the 'School Management System' Admin interface. The page title is 'School Management System'. The user is logged in as 'Anirban Saha (Admin)'. The main content area is titled 'Student list' and contains a search bar and a table of students.

Id	Name	Email	Mobile	Gender	DOB	Present Address	Class	Section	Roll	Action
3002	Karim	karim@gmail.com	01758631248	male	2004-11-29	khulna	Eight	B	22	Edit / Delete
3004	Rahim ali	rahim@a.com	01745693625	male	2009-02-02	ullapara	Seven	B	55	Edit / Delete
3010	Nafiz	nafiz@gmail.com	01747496866	male	2010-02-08	DHAKA,BANGLADESH	Eight	B	500	Edit / Delete
4001	anik saha	anik@gmail.com	01756551234	male	2004-06-16	mkunja-2	Seven	B	24	Edit / Delete
4003	Ella	ella@gmail.com	01776584213	female	2004-02-13	dhaka	Eight	B	19	Edit / Delete
4004	Laura	l@gmail.com	01772541167	female	2003-09-11	khulna	Seven	B	65	Edit / Delete

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The screenshot shows the Selenium IDE interface with a project named 'SMS'. The test is titled 'Delete student' and is currently running. The test steps are as follows:

Command	Target	Value
1. ✓ open	/network/All%20Project/School-management-system-main/School-management-system-main/Admin/view/viewStudent.php	
2. ✓ set window size	1936x1048	
3. // click	css=tr:nth-child(7) a:nth-child(2)	
4. // click	css=tr:nth-child(6) a:nth-child(2)	

The test log shows the following steps:

- 1. open on /network/All%20Project/School-management-system-main/School-management-system-main/Admin/view/viewStudent.php OK
- 2. setWindowSize on 1936x1048 OK

Explanation: We tested here if it was returning to landing/home page from the login page. This can be done by clicking on the home button. The test is successful.

10. Edit student information Test:

The screenshot shows a web browser window with the URL `localhost/network/AIR%20Project/School-management-system-main/School-management-system-main/Admin/view/editStudent.php?id=4001`. The page title is "School Management System". On the left, there is a sidebar with the user "Anirban Saha (Admin)" and a menu with options: "Add Student", "View Student", "Edit Request", "Dashboard", and "Logout". The main content area is titled "Update Information" and contains a form for editing student details. The form fields are: Id (4001), Name (anik saha), Email (anik@gmail.com), Mobile No (01756551234), Gender (Male selected), Date of Birth (06/16/2004), Present Address (nikunja-2), Class (Seven), Section (B), and Roll No (24). An "Update" button is at the bottom right of the form. The footer of the page says "Copyright © 2021".

Field	Value
Id	4001
Name	anik saha
Email	anik@gmail.com
Mobile No	01756551234
Gender	Male
Date of Birth	06/16/2004
Present Address	nikunja-2
Class	Seven
Section	B
Roll No	24

The screenshot shows the Selenium IDE interface for a project named "SMS". The test script is titled "edit student" and is executed on the URL `http://localhost`. The script consists of 17 steps, including clicking, selecting, typing, and asserting. The final step is an assertion that the user information was updated successfully. The log at the bottom shows the execution of the script, with all steps passing successfully.

Step	Command	Target	Value
3	click	id=section	
4	select	id=section	label=A
5	click	id=mobile	
6	type	id=mobile	017586312456
7	click	id=name	
8	type	id=name	karim hassan
9	click	name=update	
10	click	id=mobile	
11	click	id=mobile	
12	click	id=mobile	
13	type	id=mobile	01747496866
14	type	id=email	hasibammostofahsib@gmail.com
15	type	id=p_address	DHAKA,BANGLADESH
16	click	name=update	
17	assert alert	User information Updated Successfully!	

Explanation: We tested the edit of student information using the edit and update button and the test is successfully completed. No error is occurring.

Summary of the test results:

- Total number of test: 14
- Number of test passed: 11
- Number of test failed: 3
- Percentage of test passed: 78.6%

Defects Identified: There are defects in these test cases – Adding Teacher Test, Adding Student Test, Upload notes Test. Defects are shown in the pictures above in the corresponding test cases.

Conclusion: The testing of the School Management system using Selenium IDE has shown promising results with a success rate of 78.6%. While this success rate indicates that a majority of the test cases executed successfully, it also highlights areas where improvements can be made.