

Introduction to Software Engineering

Working Software

Working Software documentation for the assigned course project, following the attached template.



Software Engineering Department
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Automated Testing and Working Software

Objectives

This document focuses on the following topics:

- ✓ Completing the Automated Testing & Working Software document with the following sections:
 - Automated Testing
 - Working Software

1. Member Contribution Assessment

ID	Name	Contribution (%)	Signature
23127097	Trần Trí Nhân	100%	
23127168	Cao Trần Bá Đạt	100%	 Cao Trần Bá Đạt
23127193	Bùi Quang Hùng	100%	 Bùi Quang Hùng
23127234	Nguyễn An Nghiệp	100%	 Nguyễn An Nghiệp
23127238	Trần Hoài Thiện Nhân	100%	 Trần Hoài Thiện Nhân

2. Automated Testing

2.1. Use case create new bot:

2.1.1. Test case 1:

- Name: Create bot with website link
- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My
App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'),
'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My
App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'),
'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign
In'))

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create New Bot'))

WebUI.click(findTestObject('Object Repository/Page_My App/label_Gemini
2.5 FlashMid-size, fast, and balanced'))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _103048'), 'New test bot 1')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Add
Website LinkTrain bot with websi_c3782b'))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Add
Website Link_w-full px-4 py-3 rou_4f10b6'),
'https://en.wikipedia.org/wiki/Dog')
```

```

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create Bot'))

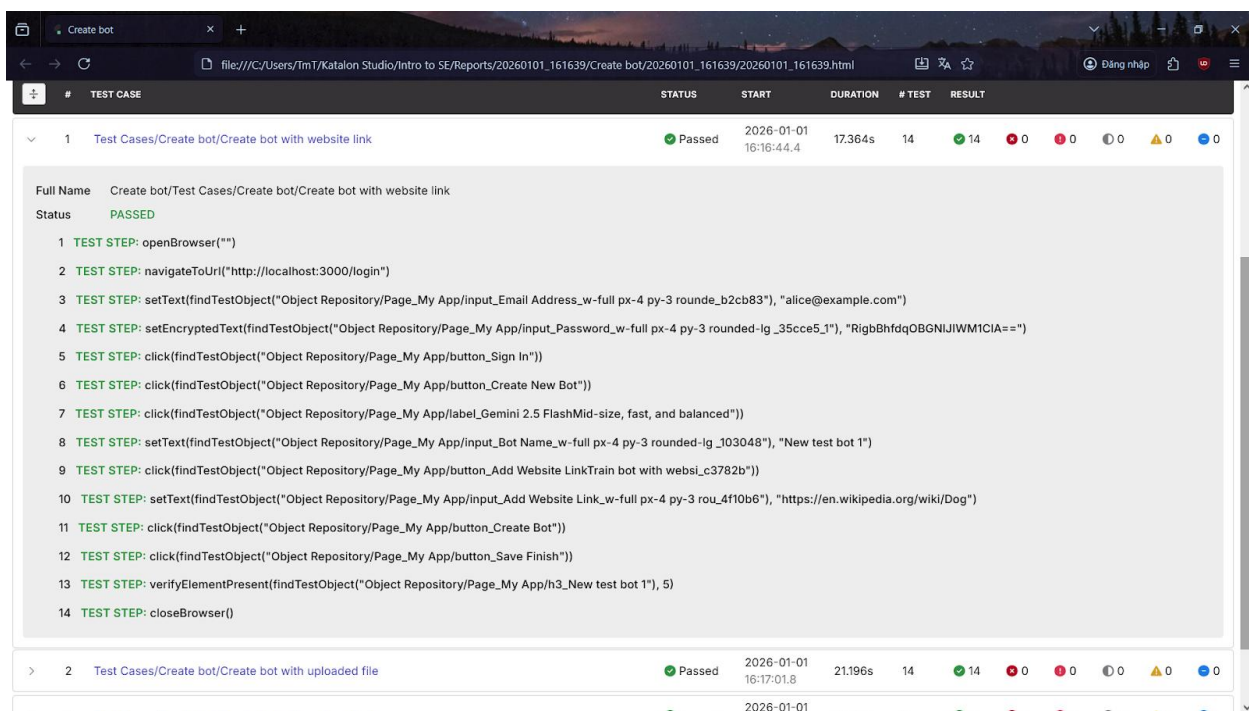
WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Finish'))

WebUI.verifyElementPresent(findTestObject('Object Repository/Page_My
App/h3_New test bot 1'), 5)

WebUI.closeBrowser()

```

- Result: **Passed**



2.1.2.

- Create bot with uploaded file
- Script:

```

WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My
App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'),
'alice@example.com')

```

```
WebUI.setEncryptedText(findTestObject('Object Repository/Page_My
App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'),
    'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign
In'))

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create New Bot'))

WebUI.click(findTestObject('Object Repository/Page_My App/label_Gemini
2.5 FlashMid-size, fast, and balanced'))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _103048'), 'New test bot 2')

WebUI.uploadFile(findTestObject('Object Repository/Page_My
App/input_Upload File'),
    'C:\\Users\\TmT\\Documents\\Programing\\tmp\\HelloWorld.txt')

WebUI.waitForElementPresent(findTestObject('Object Repository/Page_My
App/div_File uploaded successfully'), 10)

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create Bot'))

WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Finish'))

WebUI.verifyElementPresent(findTestObject('Page_My App/h3_New test bot
2'), 5)

WebUI.closeBrowser()
```

- Result: **Passed**

#	TEST CASE	STATUS	START	DURATION	# TEST	RESULT
1	Test Cases/Create bot/Create bot with website link	Passed	2026-01-01 16:16:44.4	17.364s	14	14 0 0 0 0 0
2	Test Cases/Create bot/Create bot with uploaded file	Passed	2026-01-01 16:17:01.8	21.196s	14	14 0 0 0 0 0

Full Name	Create bot/Test Cases/Create bot/Create bot with uploaded file
Status	PASSED
1 TEST STEP:	openBrowser("")
2 TEST STEP:	navigateToUrl("http://localhost:3000/login")
3 TEST STEP:	setText(findTestObject("Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounde_b2cb83"), "alice@example.com")
4 TEST STEP:	setEncryptedText(findTestObject("Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1"), "RigbBhfdqOBGNlJIWM1CIA==")
5 TEST STEP:	click(findTestObject("Object Repository/Page_My App/button_Sign In"))
6 TEST STEP:	click(findTestObject("Object Repository/Page_My App/button_Create New Bot"))
7 TEST STEP:	click(findTestObject("Object Repository/Page_My App/label_Gemini 2.5 FlashMid-size, fast, and balanced"))
8 TEST STEP:	setText(findTestObject("Object Repository/Page_My App/input_Bot Name_w-full px-4 py-3 rounded-lg _103048"), "New test bot 2")
9 TEST STEP:	uploadFile(findTestObject("Object Repository/Page_My App/input_Upload File"), "C:\\Users\\TmT\\Documents\\Programing\\tmp\\HelloWorld.txt")
10 TEST STEP:	waitForElementPresent(findTestObject("Object Repository/Page_My App/div_File uploaded successfully"), 10)
11 TEST STEP:	click(findTestObject("Object Repository/Page_My App/button_Create Bot"))
12 TEST STEP:	click(findTestObject("Object Repository/Page_My App/button_Save Finish"))
13 TEST STEP:	verifyElementPresent(findTestObject("Page_My App/h3_New test bot 2"), 5)
14 TEST STEP:	closeBrowser()

2.1.3.

- Create bot with no knowledge source
- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'), 'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'), 'RigbBhfdqOBGNlJIWM1CIA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign In'))

WebUI.click(findTestObject('Object Repository/Page_My App/button_Create New Bot'))

WebUI.click(findTestObject('Object Repository/Page_My App/label_Gemini 2.5 FlashMid-size, fast, and balanced'))
```



```

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _103048'), 'New test bot 1')

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create Bot'))

WebUI.verifyElementPresent(findTestObject('Object Repository/Page_My
App/div_Knowledge source required'), 5)

WebUI.closeBrowser()

```

- Result: **Passed**

#	TEST CASE	STATUS	START	DURATION	# TEST	RESULT
1	Test Cases/Create bot/Create bot with website link	Passed	2026-01-01 16:16:44.4	17.364s	14	14 Passed, 0 Failed, 0 Skipped, 0 Pending, 0 Error
2	Test Cases/Create bot/Create bot with uploaded file	Passed	2026-01-01 16:17:01.8	21.196s	14	14 Passed, 0 Failed, 0 Skipped, 0 Pending, 0 Error
3	Test Cases/Create bot/Create bot with no knowledge source	Passed	2026-01-01 16:17:23.0	10.418s	11	11 Passed, 0 Failed, 0 Skipped, 0 Pending, 0 Error
4	Test Cases/Create bot/Adjust response in creation	Passed	2026-01-01 16:17:33.4	16.390s	16	16 Passed, 0 Failed, 0 Skipped, 0 Pending, 0 Error

Full Name	Status
Create bot/Test Cases/Create bot/Create bot with no knowledge source	PASSED

- TEST STEP: openBrowser("")
- TEST STEP: navigateToUrl("http://localhost:3000/login")
- TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounded-lg _b2cb83"), "alice@example.com")
- TEST STEP: setEncryptedText(findTestObject("Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1"), "RigBhfdqOBGNIJWM1CIA=")
- TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Sign In"))
- TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Create New Bot"))
- TEST STEP: click(findTestObject("Object Repository/Page_My App/label_Gemini 2.5 FlashMid-size, fast, and balanced"))
- TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Bot Name_w-full px-4 py-3 rounded-lg _103048"), "New test bot 1")
- TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Create Bot"))
- TEST STEP: verifyElementPresent(findTestObject("Object Repository/Page_My App/div_Knowledge source required"), 5)
- TEST STEP: closeBrowser()

2.1.4.

- Adjust response in creation

- Script:

```

WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My
App/input_Email Address_w-full px-4 py-3 rounded-lg _b2cb83'),
'alice@example.com')

```

```
WebUI.setEncryptedText(findTestObject('Object Repository/Page_My
App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'),
    'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign
In'))

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create New Bot'))

WebUI.click(findTestObject('Object Repository/Page_My App/label_Gemini
2.5 FlashMid-size, fast, and balanced'))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _103048'), 'New test bot 1')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Add
Website LinkTrain bot with websi_c3782b'))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Add
Website Link_w-full px-4 py-3 rou_4f10b6'),
    'https://en.wikipedia.org/wiki/Dog')

WebUI.click(findTestObject('Object Repository/Page_My
App/button_Create Bot'))

WebUI.setText(findTestObject('Object Repository/Page_My
App/textarea_Adjust Bot Response_w-full border _1530fc'), 'If someone
asks "who are you?", you should answer "botchat helpdesk for
businesses".')

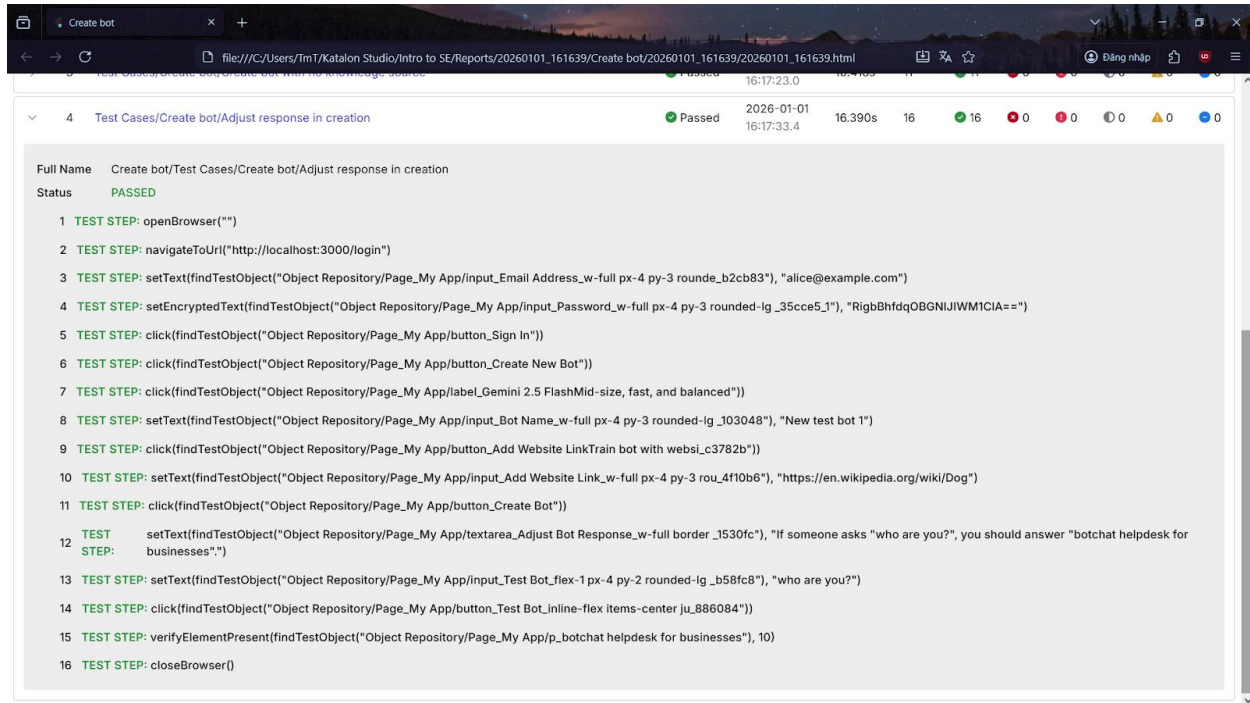
WebUI.setText(findTestObject('Object Repository/Page_My App/input_Test
Bot_flex-1 px-4 py-2 rounded-lg _b58fc8'), 'who are you?')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Test
Bot_inline-flex items-center ju_886084'))

WebUI.verifyElementPresent(findTestObject('Object Repository/Page_My
App/p_botchat helpdesk for businesses'), 10)

WebUI.closeBrowser()
```

- Result: **Passed**



2.2. Use case configure a bot:

2.2.1. Test case 1:

- Name: Change bot name and model
- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'), 'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'), 'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign In'))

WebUI.click(findTestObject('Page_My App/button_View', [('botName') : GlobalVariable.curBotName]))
```

```

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _c75973'), 'Selling cars')

WebUI.click(findTestObject('Object Repository/Page_My App/label_Gemini
2.5 ProHighest intelligence fo_47f2eb'))

WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Changes'))

WebUI.verifyElementText(findTestObject('Page_My App/h3_Selling cars'),
'Selling cars', FailureHandling.STOP_ON_FAILURE)

WebUI.verifyElementText(findTestObject('Object Repository/Page_My
App/p_Model gemini-2.5-pro'), 'Model: gemini-2.5-pro')

WebUI.closeBrowser()

GlobalVariable.curBotName = 'Selling cars'

```

- Result: **Passed**

The screenshot shows the Katalon Studio interface with the test results for the 'Config bot' test case. The test case is listed as 'Test Cases/Config bot/Change bot name and model' and is marked as 'Passed'. The test steps are detailed in the 'Full Name' section, showing a sequence of actions including opening the browser, navigating to the login page, setting the email address, setting the password, clicking the 'Sign In' button, clicking the 'botName' button, setting the bot name to 'Selling cars', clicking the 'Gemini 2.5 ProHighest intelligence' button, clicking the 'Save Changes' button, verifying the 'Selling cars' text, verifying the 'Model: gemini-2.5-pro' text, closing the browser, and setting the 'curBotName' to 'Selling cars'.

#	TEST CASE	STATUS	START	DURATION	# TEST	RESULT
1	Test Cases/Config bot/Change bot name and model	Passed	2025-12-30 22:08:13.6	15.399s	13	13 Passed, 0 Failed, 0 Error, 0 Incomplete, 0 Skipped

Full Name: Config bot/Test Cases/Config bot/Change bot name and model
 Status: PASSED

- TEST STEP: openBrowser("")
- TEST STEP: navigateToUrl("http://localhost:3000/login")
- TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounded-lg _b2cb83"), "alice@example.com")
- TEST STEP: setEncryptedText(findTestObject("Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1"), "RigbBhfdqOBGNIUWM1CIA==")
- TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Sign In"))
- TEST STEP: click(findTestObject("Page_My App/button_View", [{"botName": curBotName}]))
- TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Bot Name_w-full px-4 py-3 rounded-lg _c75973"), "Selling cars")
- TEST STEP: click(findTestObject("Object Repository/Page_My App/label_Gemini 2.5 ProHighest intelligence fo_47f2eb"))
- TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Save Changes"))
- TEST STEP: verifyElementText(findTestObject("Page_My App/h3_Selling cars"), "Selling cars", STOP_ON_FAILURE)
- TEST STEP: verifyElementText(findTestObject("Object Repository/Page_My App/p_Model gemini-2.5-pro"), "Model: gemini-2.5-pro")
- TEST STEP: closeBrowser()
- TEST STEP: curBotName = "Selling cars"

2.2.2. Test case 2:

- Name: Change to empty bot name

- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My
App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'),
'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My
App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'),
'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign
In'))

WebUI.click(findTestObject('Page_My App/button_View', [('botName') :
GlobalVariable.curBotName]))

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Bot
Name_w-full px-4 py-3 rounded-lg _c75973'), '')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Changes'))

WebUI.verifyElementText(findTestObject('Object Repository/Page_My
App/h3_Unnamed Bot'), 'Unnamed Bot')

WebUI.closeBrowser()

GlobalVariable.curBotName = 'Unnamed Bot'
```

- Result: **Passed**

#	TEST CASE	STATUS	START	DURATION	# TEST	RESULT
1	Test Cases/Config bot/Change bot name and model	Passed	2025-12-30 22:08:13.6	15.399s	13	13 0 0 0 0 0
2	Test Cases/Config bot/Change to empty bot name	Passed	2025-12-30 22:08:29.0	12.486s	11	11 0 0 0 0 0
Full Name Config bot/Test Cases/Config bot/Change to empty bot name Status PASSED 1 TEST STEP: openBrowser("") 2 TEST STEP: navigateToUrl("http://localhost:3000/login") 3 TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounde_b2cb83"), "alice@example.com") 4 TEST STEP: setEncryptedText(findTestObject("Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1"), "RigbBhfdqOBGNlJIWM1CIA==") 5 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Sign In")) 6 TEST STEP: click(findTestObject("Page_My App/button_View", [{"botName": curBotName}])) 7 TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Bot Name_w-full px-4 py-3 rounded-lg _c75973"), "") 8 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Save Changes")) 9 TEST STEP: verifyElementText(findTestObject("Object Repository/Page_My App/h3_Unnamed Bot"), "Unnamed Bot") 10 TEST STEP: closeBrowser() 11 TEST STEP: curBotName = "Unnamed Bot"						
3	Test Cases/Config bot/Add knowledge by uploading a file	Passed	2025-12-30 22:08:41.5	33.244s	13	13 0 0 0 0 0
4	Test Cases/Config bot/Adjust response of a bot	Passed	2025-12-30 22:09:14.7	25.120s	13	13 0 0 0 0 0

2.2.3. Test case 3:

- Name: Add knowledge by uploading a file
- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My App/input_Email Address_w-full px-4 py-3 rounde_b2cb83'), 'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'), 'RigbBhfdqOBGNlJIWM1CIA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign In'))

WebUI.click(findTestObject('Page_My App/button_View', [{"botName": GlobalVariable.curBotName}]))

WebUI.uploadFile(findTestObject('Object Repository/Page_My App/input_Upload File'),
```



```
'C:\\Users\\TmT\\Documents\\Programing\\Intro2SE\\Lessons\\01_Software
Engineering Introduction.pdf')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Changes'))

WebUI.click(findTestObject('Page_My App/button_View', [('botName') :
GlobalVariable.curBotName]))

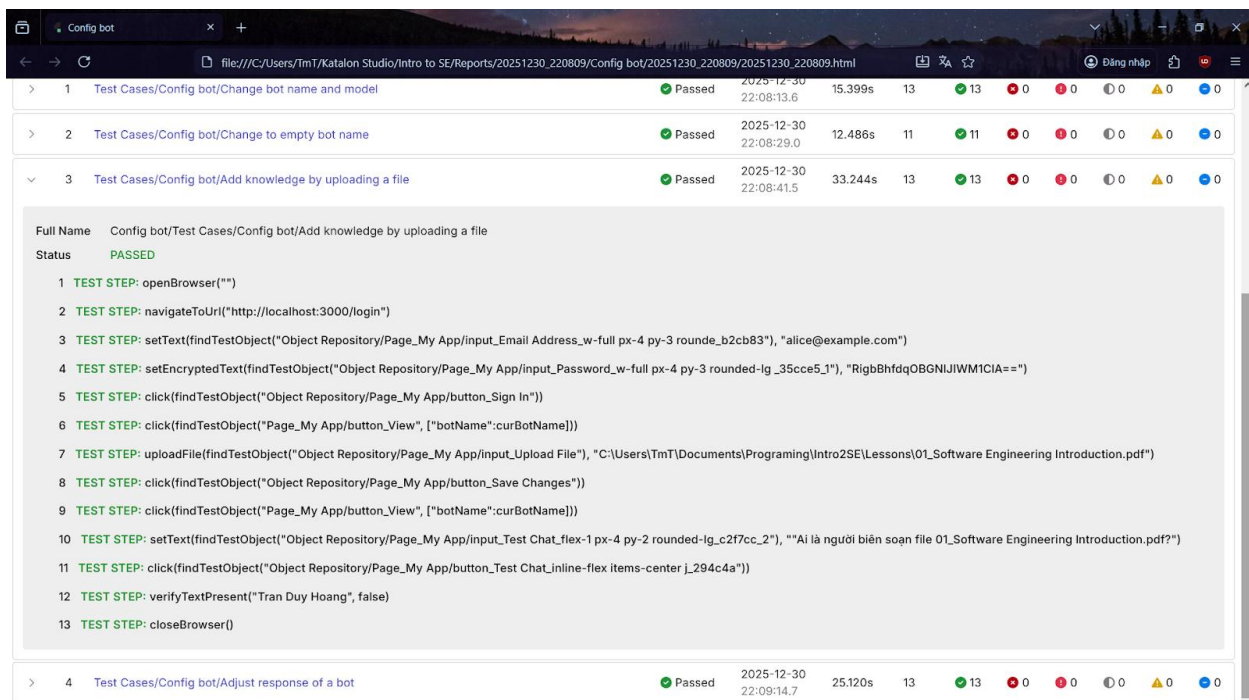
WebUI.setText(findTestObject('Object Repository/Page_My App/input_Test
Chat_flex-1 px-4 py-2 rounded-lg_c2f7cc_2'), 'Ai là người biên soạn
file 01_Software Engineering Introduction.pdf?')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Test
Chat_inline-flex items-center j_294c4a'))

WebUI.verifyTextPresent('Tran Duy Hoang', false)

WebUI.closeBrowser()
```

- Result: **Passed**



2.2.4. Test case 4:

- Name: Add knowledge by uploading a file

- Script:

```
WebUI.openBrowser('')

WebUI.navigateToUrl('http://localhost:3000/login')

WebUI.setText(findTestObject('Object Repository/Page_My
App/input_Email_Address_w-full px-4 py-3 rounde_b2cb83'),
'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My
App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'),
'RigbBhfdqOBGNlJIWM1ClA==')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Sign
In'))

WebUI.click(findTestObject('Page_My App/button_View', [('botName') :
GlobalVariable.curBotName]))

WebUI.setText(findTestObject('Object Repository/Page_My
App/textarea_Nu hi Ai l ngi to ra bn th tr li n_f77b03_2'), 'Nếu hỏi
Ai là người tạo ra bạn thì trả lời người\ntạo ra tôi là Bá Đạt')

WebUI.click(findTestObject('Object Repository/Page_My App/button_Save
Changes'))

WebUI.click(findTestObject('Page_My App/button_View', [('botName') :
GlobalVariable.curBotName]))

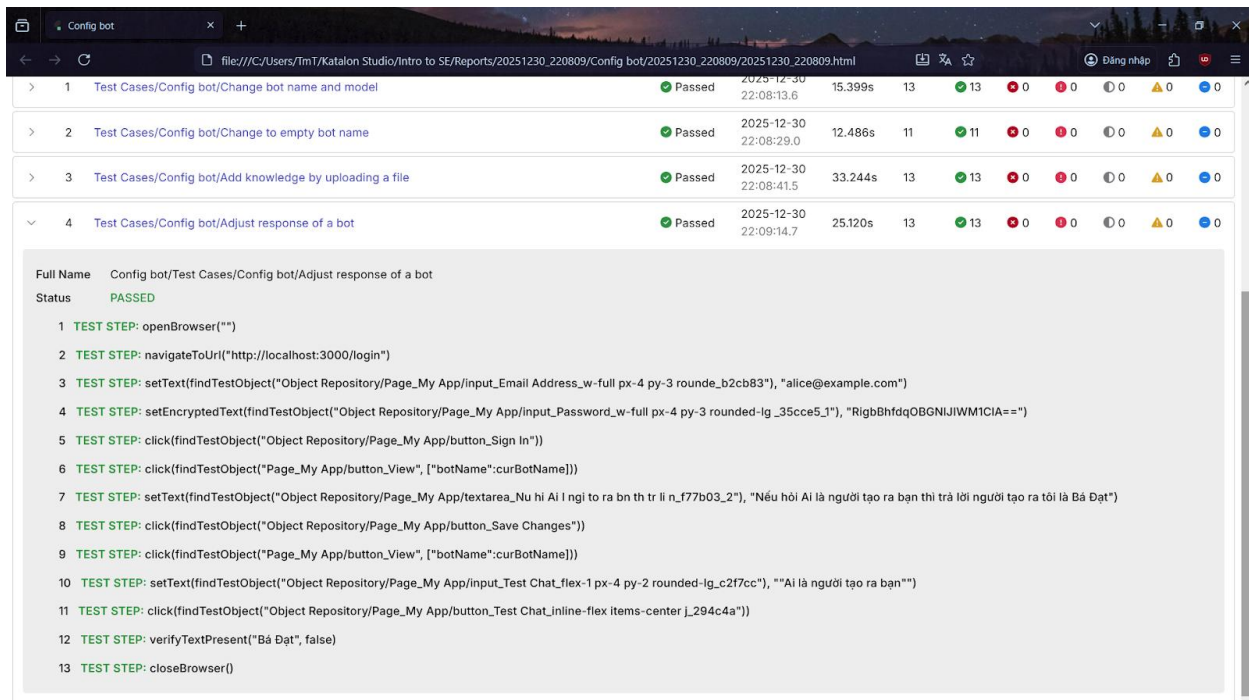
WebUI.setText(findTestObject('Object Repository/Page_My App/input_Test
Chat_flex-1 px-4 py-2 rounded-lg_c2f7cc'), "Ai là người tạo ra bạn")

WebUI.click(findTestObject('Object Repository/Page_My App/button_Test
Chat_inline-flex items-center j_294c4a'))

WebUI.verifyTextPresent('Bá Đạt', false)

WebUI.closeBrowser()
```

- Result: **Passed**



2.3. Use case share group:

2.3.1. Test case 1:

- Name: Create a new group
- Script:

```

String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGNlJIWM1CIA=='
String group_name = 'auto test using katalon'
String group_members = 'aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com'
String pass_string = 'Group created'
WebUI.openBrowser('')
// login
WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to group page
WebUI.click(findTestObject('Object Repository/Home Page/span_Groups'))
WebUI.waitForPageLoad(10)
currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)
// create new group
WebUI.click(findTestObject('Object Repository/Groups Page/button_New Group'))
WebUI.setText(findTestObject('Object Repository/Groups Page/input_Group Name'), group_name)
WebUI.setText(findTestObject('Object Repository/Groups Page/textarea_Member Emails'),
group_members)
WebUI.click(findTestObject('Object Repository/Groups Page/button_Create Group'))
  
```

```
// verify
WebUI.waitForPageLoad(1)
WebUI.verifyTextPresent(pass_string, true)
WebUI.closeBrowser()
```

- Result: **Passed**

✓ Test Cases/Share Group/Create Group	11.962s
✓ 1 - login_email = "isQ@email.test"	4ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGNlJIWM1CIA=="	2ms
✓ 3 - group_name = "auto test using katalon"	3ms
✓ 4 - group_members = "aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com"	3ms
✓ 5 - pass_string = "Group created"	3ms
> ✓ 6 - openBrowser("")	1.868s
✓ 7 - navigateToUrl("http://localhost:3000/login")	509ms
✓ 8 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)	893ms
✓ 9 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)	339ms
✓ 10 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))	308ms
✓ 11 - click(findTestObject("Object Repository/Home Page/span_Groups"))	2.209s
✓ 12 - waitForPageLoad(10)	79ms
✓ 13 - currentUrl = getUrl()	13ms
✓ 14 - verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)	23ms
✓ 15 - click(findTestObject("Object Repository/Groups Page/button_New Group"))	657ms
✓ 16 - setText(findTestObject("Object Repository/Groups Page/input_Group Name"), group_name)	1.96s
✓ 17 - setText(findTestObject("Object Repository/Groups Page/textarea_Member Emails"), group_...	869ms
✓ 18 - click(findTestObject("Object Repository/Groups Page/button_Create Group"))	543ms
✓ 19 - waitForPageLoad(1)	11ms
✓ 20 - verifyTextPresent(pass_string, true)	1.785s
✓ 21 - closeBrowser()	137ms

2.3.2. Test case 2:

- Name: Update member list of groups

- Script:

```
String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGNlJIWM1CIA=='
String group_name = 'auto test using katalon'
String group_members = 'aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com,aidomatuikobik3@gmail.com'
String pass_string = 'Group updated'
WebUI.openBrowser('')
// login
WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to group page
WebUI.click(findTestObject('Object Repository/Home Page/span_Groups'))
WebUI.waitForPageLoad(10)
```

```

currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)
// update group
WebUI.click(findTestObject('Object Repository/Groups Page/button_Edit', [('group_name') :
group_name]))
WebUI.setText(findTestObject('Object Repository/Groups Page/textarea_Member Emails'),
group_members)
WebUI.click(findTestObject('Object Repository/Groups Page/button_Update'))
// verify
WebUI.waitForPageLoad(1)
WebUI.verifyTextPresent(pass_string, true)
WebUI.closeBrowser()

```

- Result: **Passed**

Test Cases/Share Group/Update Group		10.559s
✓ 1 - login_email = "isQ@email.test"	Test Cases/Share Group/Update Group	4ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGN1JIWM1ClA=="		2ms
✓ 3 - group_name = "auto test using katalon"		2ms
✓ 4 - group_members = "aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com,aidomatuikobik3..."		2ms
✓ 5 - pass_string = "Group updated"		2ms
> ✓ 6 - openBrowser("")		1.863s
✓ 7 - navigateToUrl("http://localhost:3000/login")		542ms
✓ 8 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)		862ms
✓ 9 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)		342ms
✓ 10 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))		312ms
✓ 11 - click(findTestObject("Object Repository/Home Page/span_Groups"))		2.190s
✓ 12 - waitForPageLoad(10)		76ms
✓ 13 - currentUrl = getUrl()		14ms
✓ 14 - verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)		19ms
✓ 15 - click(findTestObject("Object Repository/Groups Page/button_Edit", ["group_name":group_n...])		700ms
✓ 16 - setText(findTestObject("Object Repository/Groups Page/textarea_Member Emails"), group_...		1.368s
✓ 17 - click(findTestObject("Object Repository/Groups Page/button_Update"))		571ms
✓ 18 - waitForPageLoad(1)		12ms
✓ 19 - verifyTextPresent(pass_string, true)		953ms
✓ 20 - closeBrowser()		157ms

2.3.3. Test case 3:

- Name: Delete a group

- Script:

```

String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGN1JIWM1ClA=='
String group_name = 'auto test using katalon'
String group_members =
'aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com,aidomatuikobik3@gmail.com'
String pass_string = 'Update successful!'
WebUI.openBrowser('')
// login

```

```

WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to group page
WebUI.click(findTestObject('Object Repository/Home Page/span_Groups'))
WebUI.waitForPageLoad(10)
currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)
// delete group
WebUI.click(findTestObject('Object Repository/Groups Page/button_Delete', [('group_name') :
group_name]))
WebUI.click(findTestObject('Object Repository/Groups Page/button_Delete Confirm',))
// verify
WebUI.waitForPageLoad(1)
WebUI.verifyTextPresent(pass_string, true)
WebUI.closeBrowser()

```

- Result: **Passed**

✓	Test Cases/Share Group/Delete Group	8.17s
✓	1 - login_email = "isQ@email.test"	2ms
✓	2 - login_password_hashed = "RigbBhfdqOBGNIJIWM1CIA=="	1ms
✓	3 - group_name = "auto test using katalon"	3ms
✓	4 - group_members = "aidomatuikobik1@gmail.com,aidomatuikobik2@gmail.com,aidomatuikobik3..."	3ms
✓	5 - pass_string = "Update successful!"	3ms
>	6 - openBrowser("")	1.832s
✓	7 - navigateToUrl("http://localhost:3000/login")	515ms
✓	8 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)	913ms
✓	9 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)	374ms
✓	10 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))	335ms
✓	11 - click(findTestObject("Object Repository/Home Page/span_Groups"))	897ms
✓	12 - waitForPageLoad(10)	93ms
✓	13 - currentUrl = getUrl()	28ms
✓	14 - verifyMatch(currentUrl, "http://localhost:3000/account/groups", false)	22ms
✓	15 - click(findTestObject("Object Repository/Groups Page/button_Delete", ["group_name":group_name]))	970ms
✓	16 - click(findTestObject("Object Repository/Groups Page/button_Delete Confirm"))	590ms
✓	17 - waitForPageLoad(1)	14ms
✓	18 - verifyTextPresent(pass_string, true)	713ms
✓	19 - closeBrowser()	126ms

2.4. Use case chat bot:

2.4.1. Test case 1:

- Name: Create a chat and chat with bot
- Script:

```
String login_email = 'isQ@email.test'
```



```

String login_password_hashed = 'RigbBhfdqOBGNlJIWM1CIA=='
String bot_name = 'katalon test bot'
String prompt = 'i am testing chat bot feature, just send back "Hi! How can I help you?"'
String pass_string = 'Hi! How can I help you?'
WebUI.openBrowser('')
// login
WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to chat page
WebUI.click(findTestObject('Object Repository/Home Page/span_Chat'))
WebUI.waitForPageLoad(10)
currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)
// new chat
WebUI.click(findTestObject('Object Repository/Chat Page/button_New Chat'))
WebUI.click(findTestObject('Object Repository/Chat Page/button_Choose Bot', [('bot_name') :
bot_name] ))
WebUI.setText(findTestObject('Object Repository/Chat Page/input_Chat'), prompt)
WebUI.click(findTestObject('Object Repository/Chat Page/button_Send Chat'))
// verify ai thinking
WebUI.waitForPageLoad(1)
WebUI.verifyTextPresent(pass_string, false)
WebUI.closeBrowser()

```

- Result: **Passed**

✓ Test Cases/Chat Bot/Create Chat	14.267s
✓ 1 - login_email = "isQ@email.test"	4ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGNlJIWM1CIA=="	2ms
✓ 3 - bot_name = "katalon test bot"	3ms
✓ 4 - prompt = "i am testing chat bot feature, just send back "Hi! How can I help you?""	2ms
✓ 5 - pass_string = "Hi! How can I help you?"	1ms
> ✓ 6 - openBrowser("")	2.9s
✓ 7 - navigateToUrl("http://localhost:3000/login")	507ms
✓ 8 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)	951ms
✓ 9 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)	369ms
✓ 10 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))	328ms
✓ 11 - click(findTestObject("Object Repository/Home Page/span_Chat"))	1.18s
✓ 12 - waitForPageLoad(10)	85ms
✓ 13 - currentUrl = getUrl()	16ms
✓ 14 - verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)	27ms
✓ 15 - click(findTestObject("Object Repository/Chat Page/button_New Chat"))	2.352s
✓ 16 - click(findTestObject("Object Repository/Chat Page/button_Choose Bot", ["bot_name":bot_n...	537ms
✓ 17 - setText(findTestObject("Object Repository/Chat Page/input_Chat"), prompt)	2.170s
✓ 18 - click(findTestObject("Object Repository/Chat Page/button_Send Chat"))	318ms
✓ 19 - waitForPageLoad(1)	14ms
✓ 20 - verifyTextPresent(pass_string, true)	2.850s
✓ 21 - closeBrowser()	159ms

2.4.2. Test case 2:

- Name: Send a ticket
- Script:

```
String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGN1JIWM1ClA=='
String bot_name = 'katalon test bot'
String ticket_input = 'just a test ticket'
WebUI.openBrowser('')
// login
WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to chat page
WebUI.click(findTestObject('Object Repository/Home Page/span_Chat'))
WebUI.waitForPageLoad(10)
currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)
//send a ticket
WebUI.click(findTestObject('Object Repository/Chat Page/button_Choose Chat', [('bot_name')
: bot_name]))
WebUI.click(findTestObject('Object Repository/Chat Page/button_Send a Ticket'))
WebUI.setText(findTestObject('Object Repository/Chat Page/input_Ticket'), ticket_input)
WebUI.click(findTestObject('Object Repository/Chat Page/button_Submit Ticket'))
// verify
WebUI.verifyAlertPresent(5)
WebUI.closeBrowser()
```

- Result: Passed

✓	Test Cases/Chat Bot/Send a ticket	13.21s
✓	1 - login_email = "isQ@email.test"	2ms
✓	2 - login_password_hashed = "RigbBhfdqOBGNIJIWM1CIA=="	2ms
✓	3 - bot_name = "katalon test bot"	2ms
✓	4 - ticket_input = "just a test ticket"	1ms
>	5 - openBrowser("")	1.883s
✓	6 - navigateToUrl("http://localhost:3000/login")	514ms
✓	7 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)	889ms
✓	8 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)	357ms
✓	9 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))	375ms
✓	10 - click(findTestObject("Object Repository/Home Page/span_Chat"))	1.943s
✓	11 - waitForPageLoad(10)	88ms
✓	12 - currentUrl = getUrl()	19ms
✓	13 - verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)	22ms
✓	14 - click(findTestObject("Object Repository/Chat Page/button_Choose Chat", ["bot_name":bot_...)	1.766s
✓	15 - click(findTestObject("Object Repository/Chat Page/button_Send a Ticket"))	1.486s
✓	16 - setText(findTestObject("Object Repository/Chat Page/input_Ticket"), ticket_input)	1.52s
✓	17 - click(findTestObject("Object Repository/Chat Page/button_Submit Ticket"))	349ms
✓	18 - verifyAlertPresent(5)	1.569s
✓	19 - closeBrowser()	152ms

2.4.3. Test case 3:

- Name: Delete chat history
- Script:

```
String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGNIJIWM1CIA=='
String bot_name = 'katalon test bot'
String pass_string = 'katalon test bot'
WebUI.openBrowser('')
// login
WebUI.navigateToUrl('http://localhost:3000/login')
WebUI.setText(findTestObject('Object Repository/Login Page/input_Email Address'),
login_email)
WebUI.setEncryptedText(findTestObject('Login Page/input_Password'), login_password_hashed)
WebUI.click(findTestObject('Object Repository/Login Page/button_Sign In_1'))
// go to chat page
WebUI.click(findTestObject('Object Repository/Home Page/span_Chat'))
WebUI.waitForPageLoad(10)
currentUrl = WebUI.getUrl()
WebUI.verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)
//delete chat history
WebUI.click(findTestObject('Object Repository/Chat Page/button_Delete Chat', [( 'bot_name' )
: bot_name] ))
// verify
WebUI.waitForPageLoad(1)
WebUI.verifyTextNotPresent(pass_string, true)
WebUI.closeBrowser()
```

- Result: **Passed**

✓	✓	Test Cases/Chat Bot/Delete Chat	9.232s
	✓	1 - login_email = "isQ@email.test"	3ms
	✓	2 - login_password_hashed = "RigbBhfdqOBGNIJIWM1CIA=="	2ms
	✓	3 - bot_name = "katalon test bot"	3ms
	✓	4 - pass_string = "katalon test bot"	3ms
>	✓	5 - openBrowser("")	1.868s
	✓	6 - navigateToUrl("http://localhost:3000/login")	482ms
	✓	7 - setText(findTestObject("Object Repository/Login Page/input_Email Address"), login_email)	870ms
	✓	8 - setEncryptedText(findTestObject("Login Page/input_Password"), login_password_hashed)	375ms
	✓	9 - click(findTestObject("Object Repository/Login Page/button_Sign In_1"))	324ms
	✓	10 - click(findTestObject("Object Repository/Home Page/span_Chat"))	2.69s
	✓	11 - waitForPageLoad(10)	84ms
	✓	12 - currentUrl = getUrl()	15ms
	✓	13 - verifyMatch(currentUrl, "http://localhost:3000/account/chat", false)	23ms
	✓	14 - click(findTestObject("Object Repository/Chat Page/button_Delete Chat", ["bot_name":bot_n...	1.840s
	✓	15 - waitForPageLoad(1)	11ms
	✓	16 - verifyTextNotPresent(pass_string, true)	584ms
	✓	17 - closeBrowser()	156ms

3. Working Software

Link video demo for working software: [Video demo](#)

4. Project Presentation

Link canva for project presentation: [Presentation ChatBot HelpDesk Group 10](#)