

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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Table of Contents

Introduction to Software Engineering	1
Objectives.....	1
1. Member Contribution Assessment.....	2
2. Automated Testing.....	3
2.1. Use case create new bot:	3
2.1.1. Test case 1:	3
2.1.2.	4
2.1.3.	6
2.1.4.	7
2.2. Use case configure a bot:	9
2.2.1. Test case 1:	9
2.2.2. Test case 2:	10
2.2.3. Test case 3:	12
2.2.4. Test case 4:	13
2.3. Use case share group:	15
2.3.1. Test case 1:	15
2.3.2. Test case 2:	16
2.3.3. Test case 3:	17
2.4. Use case chat bot:	18
2.4.1. Test case 1:	18
2.4.2. Test case 2:	20
2.4.3. Test case 3:	21
3. Working Software	23
4. Project Presentation.....	24

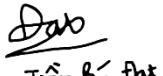
Automated Testing and Working Software

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 rounded_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

The screenshot shows the Katalon Studio Test Case report interface. It displays two test cases under the 'TEST CASE' section:

- Test Case 1: Create bot with website link**
 - Status: PASSED
 - Full Name: Create bot/Test Cases/Create bot/Create bot with website link
 - Details: 14 steps, duration 17.364s, started at 2026-01-01 16:16:44.4.
 - Steps (partial list):
 - 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"), "RigBhfdqOBGNlJlWM1CIA==")
 - 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 1")
 - 9 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Add Website LinkTrain bot with websi_c3782b"))
 - 10 TEST STEP: 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")
 - 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("Object Repository/Page_My App/h3_New test bot 1"), 5)
 - 14 TEST STEP: closeBrowser()
- Test Case 2: Create bot with uploaded file**
 - Status: PASSED
 - Full Name: Create bot/Test Cases/Create bot/Create bot with uploaded file
 - Details: 14 steps, duration 21.196s, started at 2026-01-01 16:17:01.8.

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

The screenshot shows a test case report in Katalon Studio. The title bar says 'Create bot'. The main area displays a table of test cases:

	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
▽	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

Below the table, the 'Full Name' is listed as 'Create bot/Test Cases/Create bot/Create bot with uploaded file' and the 'Status' is 'PASSED'. The detailed steps of the test case are shown in the code block below:

```

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\Programming\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

The screenshot shows a browser window titled "Create bot" with a test report. The report table has the following data:

	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
>	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
▽	3 Test Cases/Create bot/Create bot with no knowledge source	Passed	2026-01-01 16:17:23,0	10.418s	11	11 0 0 0 0

Full Name: Create bot/Test Cases/Create bot/Create bot with no knowledge source
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 rounde_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"), "RigbBhfdqOBGNiJiWM1CIA==")
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()

> 4 Test Cases/Create bot/Adjust response in creation Passed 2026-01-01 16:17:33,4 16.390s 16 16 0 0 0 0

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 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'),
    'RigBhfdqOBGNlJIWm1ClA==')

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".')

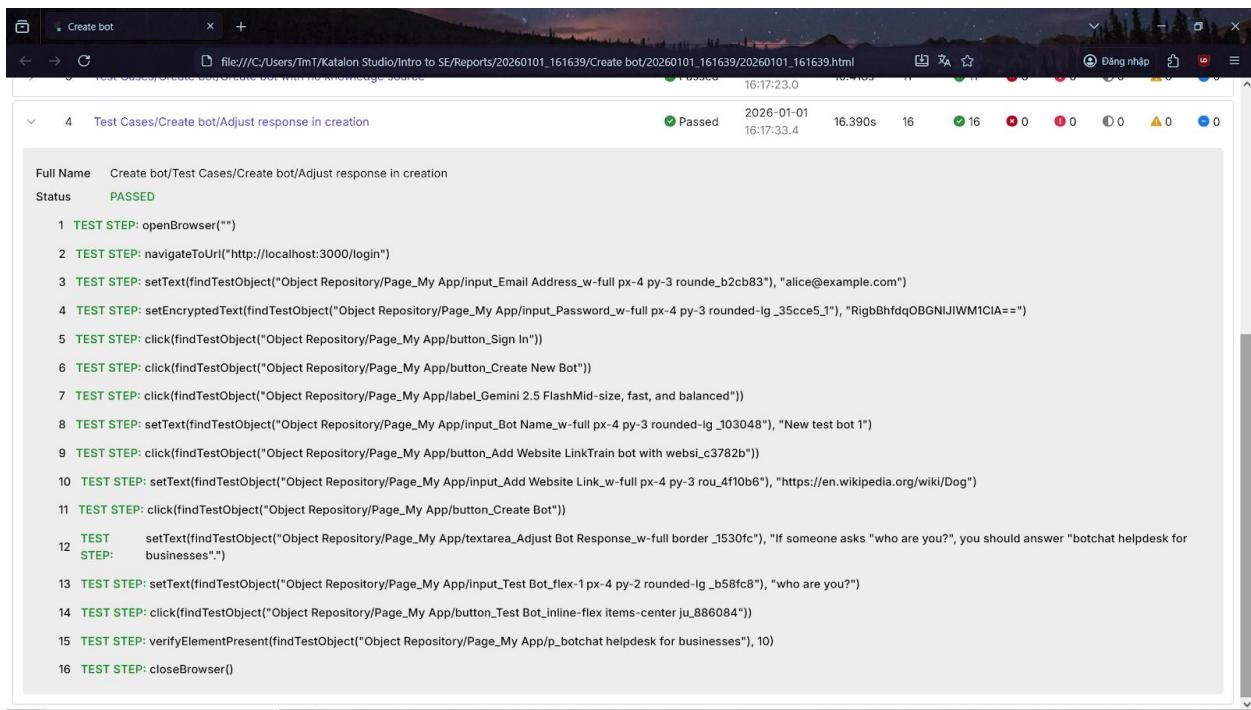
WebUI.setText(findTestObject('Object Repository/Page_My App/input_Test Bot	flex-1 px-4 py-2 rounded-lg _b58fc8'), 'who are you?')

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 a Katalon Studio test report window. At the top, it displays the URL: file:///C:/Users/TmT/Katalon Studio/Intro to SE/Reports/20251230_220809/Config bot/20251230_220809/20251230_220809.html. Below the URL, there's a summary bar with the following data:

Test Cases	4	Passed	0	Failed	0	Error	0	Incomplete	0	Skipped	0

Details below the summary bar:

- Start: 2025-12-30 22:08:13.0
- End: 2025-12-30 22:09:39.9
- Duration: 1m 26.898s

The main table lists the test cases:

#	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

Below the table, the test steps are listed:

- 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"), "RigbBhfdqOBGNIIJWMIW1CIA==")
- 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"), "Selling cars")
- 8 TEST STEP: click(findTestObject("Object Repository/Page_My App/label_Gemini 2.5 ProHighest intelligence fo_47f2eb"))
- 9 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Save Changes"))
- 10 TEST STEP: verifyElementText(findTestObject("Page_My App/h3_Selling cars"), "Selling cars", STOP_ON_FAILURE)
- 11 TEST STEP: verifyElementText(findTestObject("Object Repository/Page_My App/p_Model gemini-2.5-pro"), "Model: gemini-2.5-pro")
- 12 TEST STEP: closeBrowser()
- 13 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 rounded_b2cb83'), 'alice@example.com')

WebUI.setEncryptedText(findTestObject('Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg _35cce5_1'), 'RigbBhfdqOBGNlJIWWM1ClA==')

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 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 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"), "RigbBhfdqOBGNlJIWM1ClA==") 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 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 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'), 'RigbBhfdqOBGNlJIWM1ClA==')

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\\\\Programming\\\\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

Full Name	Config bot/Test Cases/Config bot/Add knowledge by uploading a file	Status	PASSED
1	Test Cases/Config bot/Change bot name and model	Passed	2025-12-30 22:08:13.6
2	Test Cases/Config bot/Change to empty bot name	Passed	2025-12-30 22:08:29.0
3	Test Cases/Config bot/Add knowledge by uploading a file	Passed	2025-12-30 22:08:41.5
4	Test Cases/Config bot/Adjust response of a bot	Passed	2025-12-30 22:09:14.7

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-b2cb83"), "alice@example.com")

TEST STEP: setEncryptedText(findTestObject("Object Repository/Page_My App/input_Password_w-full px-4 py-3 rounded-lg_35cce5_"), "RigBhfdqOBGNlJlWM1CIA==")

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: uploadFile(findTestObject("Object Repository/Page_My App/input_Upload File"), "C:\\Users\\TmT\\Documents\\Programming\\Intro2SE\\Lessons\\01_Software Engineering Introduction.pdf")

TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Save Changes"))

TEST STEP: click(findTestObject("Page_My App/button_View", ["botName":curBotName]))

TEST STEP: 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?")

TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Test Chat_inline-flex items-center j_294c4a"))

TEST STEP: verifyTextPresent("Tran Duy Hoang", false)

TEST STEP: closeBrowser()

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 rounded_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_Nhị Ai lèngi tạo ra bạn thtrong list_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

Test Case	Status	Run Date	Duration	Success	Failure	Warning	Info	Blocker	Critical	Minor	None
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
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

Full Name: Config bot/Test Cases/Config bot/Adjust response of a bot
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 rounded_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"), "RigbBhfdqOBGNlJIWM1ClA==")
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/textarea_Nu hi AI i ngi to ra bn th tr li n_f77b03_2"), "Nếu hỏi AI là người tạo ra bạn thì trả lời người tạo ra tôi là Bá Đạt")
8 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Save Changes"))
9 TEST STEP: click(findTestObject("Page_My App/button_View", ["botName":curBotName]))
10 TEST STEP: setText(findTestObject("Object Repository/Page_My App/input_Test Chat_px-1 px-4 py-2 rounded-lg_c2f7cc"), "Ai là người tạo ra bạn")
11 TEST STEP: click(findTestObject("Object Repository/Page_My App/button_Test Chat_inline-flex items-center_j_294c4a"))
12 TEST STEP: verifyTextPresent("Bá Đạt", false)
13 TEST STEP: closeBrowser()

```

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 = 'RigbBhfdqOBGNlJIWM1ClA=='
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

✓ 1 - login_email = "isQ@email.test"	4ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGN1JIWM1ClA=="	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 = 'RigbBhfdqOBGN1JIWM1ClA=='
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"	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@gmail.com"	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_name}]))	700ms
✓	16 - setText(findTestObject("Object Repository/Groups Page/textarea_Member Emails"), group_members)	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 = "RigbBhfdqOBGNIJlWM1CIA=="	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 = 'RigbBhfdqOBGN1JIWM1ClA=='
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

✓ 1 - login_email = "isQ@email.test"	4ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGN1JIWM1ClA=="	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()	15ms

2.4.2. Test case 2:

- Name: Send a ticket

- Script:

```
String login_email = 'isQ@email.test'
String login_password_hashed = 'RigbBhfdqOBGNlJIWM1ClA=='
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

✓ 1 - login_email = "isQ@email.test"	13.21s
✓ 2 - login_password_hashed = "RigbBhfdqOBGN1JIWM1ClA=="	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_name]))	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 = 'RigbBhfdqOBGN1JIWM1ClA=='
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

✓ 1 - login_email = "isQ@email.test"	3ms
✓ 2 - login_password_hashed = "RigbBhfdqOBGNlJlWM1CIA=="	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](#)