**Testing Task**

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**UI Automation using Robot FW**

1)**Report of executed tests**

Detailed testing reports are put inside the Result folder of Robot and API Automation projects

|  |  |  |  |
| --- | --- | --- | --- |
| No | Testcase name | Suite Type | Status |
| 1 | New User Registration through the web portal | Functional | Pass |
| 2 | Registered user is viewing the user details in main view | Functional | Pass |
| 3 | Login verification with valid user with invalid pwd | Functional | Pass |
| 4 | Login verification with invalid credentials | Functional | Pass |
| 5 | Verifying whether using an existing userID, a user can do the registration or not | Functional | Pass |
| 6 | Verifying the null validation of username field in Registration field | Sanity | Pass |
| 7 | Verifying the null validation of passwordfield in Registration field | Sanity | Pass |
| 8 | Verifying the null validation of firstname field in Registration field | Sanity | Pass |
| 9 | Verifying the null validation of lastname field in Registration field | Sanity | Pass |
| 10 | Verifying the null validation of phone field in Registration field | Sanity | Pass |
| 11 | Validating whether user field accept White space ialone | Functional | Pass |
| 12 | Validation of pwd field | Functional | Fail |
| 13 | Validation of firstname field | Functional | Fail |
| 14 | Validation of family name field | Functional | Fail |
| 15 | Validation of Phone field | Functional | Fail |

API Automation

|  |  |  |  |
| --- | --- | --- | --- |
| No | Testcase name | Suite Type | Status |
| 1 | Validating Get TOken API with valid username and pwd | Get | Pass |
| 2 | Validating the status code-Get Token API with valid username and pwd | Get | Pass |
| 3 | Validating the status -Get Token API with valid username and pwd | Get | Pass |
| 4 | Validating the Header-Get Token API with valid username and pwd | Get | Pass |
| 5 | Validating Get Token API with Invalid username | Get | Pass |
| 6 | Validating Get Token API with no username | Get | Pass |
| 7 | Validating Get Token API with Invalid pwd | Get | Pass |
| 8 | Validating Get Token API with no authentication in header | Get | Pass |
| 9 | Validating the Get user info Api with valid details | Get | Pass |
| 10 | Validating Get user info api with Invalid userId | Get | Failed(500) |
| 11 | Validating Get user info api with Invalid token | Get | Pass |
| 12 | Validating Get user info api with no token | Get | Failed(Invalid Token} |
| 13 | Validating Put user info api with valid data | put | Failed |
| 14 | Validating put user info API trying to update other fileds | put | Failed |
| 15 | Validating put user info API without token | put | pass |
| 16 | Validate get user list API | Get | pass |
| 17 | Validate get user list API without passing the token value | Get | Failed |

2) **Report of found issues/bugs**

**UI Automation**

* No proper field validation to any fields - **Accept any input typeUsername, Password, first name, Family Name, Phone number are not having any validations other than null check. Input** of White space/Blank space only throw validation
* No character limit is set for all the fields; we can send as many characters as input
* No proper error message, for each field - please fill in this field error message is showing by highlighting the particular fields
* If user is logged in and accessed the demo App link, then no way to go back to user details page, that is the username (top right corner) where the log in link was present is no more clickable. User have to login again to reach the details page
* No forgot password link is available, this can impact the login functionality
* After the registration no success message or acknowledgement and user is redirecting to the login page
* User information table headers are key, value which is not a good practice of webpage with user details

**API Automation**

* PUT of userinfo api(/api/users/{username}) was not working , getting bad request for inputting the data
* Wrong error message was showing for the user trying to update the field, other than mentioned
* Get of userinfo api(/api/users/{username}) with invalid user id was throwing 500 internal system error
* Get of userinfo api(/api/users) without passing any token value was throwing different error message
* Get of userListapi(/api/users) was able to access without passing the token, where the authentication was designed using Token.

3) **Other questions to answer about testing and testability, from your point of view**

* How do you review code?

I would make sure the code is following the coding standards, quality of code, approach taken, reusability of code, proper explanation as the comment, code coverage etc.

I was using a tool called code collaborator which is integrated with git.

* How do you enforce coding standards?

By educating the colleagues about the good coding practices, consistent approach of code analysis across the team and making the code development flexible to adapt new tools and Techniqs

* How do you plan what kind of approach you take for test automation - what libraries to use, how does it work in couple of years, how to make it easy to maintain, etc? What are the main points to consider?

Test plan would start with categorising the manual and automation scenarios,the approach would depends upon the project criterias and requirements, for eg: If a project demands huge number of test in regression, then I would go for TDD FW . This answers would vary depending on the project requirements. Like selecting the IDE and programming language choosing the right FW etc would be major challenges in the scratch period. In coming years the requirements would mostly connect with Artificial Intelligence and RPA. So python would be the main language and more modules can be added later which would enhance the whole process. So keeping the skillset relevant to the current market trend can help in maintaining the automation process in a good shape. So implementing new plugins and approach according to the market trend is essential in future.

* Code testability, how do you enforce it?

The approach would always adhere on the behaviour to different types of inputs, so apart from the AC , we have to think the possibilities in different dimesons. The test should be simple to understand by other people, so always make the complicated secnarios into simple test steps.

* How do you make sure that the product is testable?

The requirements must be clear and relatable , and the behaviour of the product in different inputs must be predictable.

4)**Exploratory Testing Report**

**UI Automation**

* Registration flow using already existing user – **Working as expected and throwing proper error message**
* Login attempts with Invalid credentials- **Working as expected and throwing proper error message**
* Mandatory check of fields by keeping them blank- **Working as expected but error message is not proper**
* Field validation by inputting random type of data- **No validation is set for the field**
* Filed length validation by inputting random data- **No limit is put for fields character length**
* Registration, Logout and login functionalities- **Working as expected**

**API Automation**

* /api/auth/token- API with out authentication,with authentication using valid credentials/invalid user/invalid pwd/with no value
* /api/auth/token API’s expected response, status code, message, header etc
* /api/users -API with and with out Token value passing as header
* /api/users -API expected response, status code, message, header etc
* /api/users/{username}-Get with and with out Token value passing as header
* /api/users/{username}-Get with invalid username
* /api/users/{username} -Getexpected response, status code, message, header etc
* /api/users/{username}-put with and with out data/Token value passing as header
* /api/users/{username}-put with invalid username
* /api/users/{username} -put expected response, status code, message, header etc
* /api/users/{username} -put trying to update other fields which are not acceptable

5)**Tell us what improvement would you propose for the app**

* **Proper error message for each field describing the acceptance criteria of the field**
* **Forgot password link**
* **Different error message for valid and invalid user’s login attempts**
* **Editing option in the user details page**
* **Have to add username &password(masked) values in the details page**
* **Warning message if you are trying to access other links while doing the registration process**
* **UI of all the pages need to aligned properly**
* **Username of the logged in user should be clickable (when user logged in the username would display near to login link, so that if the user accessed any link while logged in, would go back to user details page**

6)if you would be given a week to do quality assurance for this product, briefly plan the tasks based on your skills, knowledge and expertise

* Test plan by listing the scenarios
* Choosing the framework for front and back end automation
* Preparing the scenarios and test data
* Front and back end manual testing and finding out the bugs
* Reporting them back to development team
* Scripting of UI and API automation
* If defects are fixed and retest and close the bugs
* Completing the manual and automation testing
* Generate the test reports