

## GitLab UI Automation Project Documentation

---

### 1. Overview

This project automates GitLab UI workflows using Robot Framework with Selenium.

The work completed includes:

- Okta Single Sign-On (SSO) automation.
- GitLab UI navigation and search.
- Project selection and subgroup handling.
- Validation of GitLab pages.
- Screenshot capture.
- Token Suite with Test Case A/B/C logic.
- Failure resilience and conditional flow validation.

### 2. Token Suite (token\_suite.robot)

Contains:

- Acquire Token With Error Handling (Suite Setup)
- Test Case A (may pass/fail based on token)
- Test Case B (always runs)
- Test Case C (validates rule: A fail -> B must run)

### 3. Okta SSO Automation (gitlab\_sso\_login.robot)

- Open browser via Selenium.
- Navigate to GitLab login.
- Enter Okta email and password.
- Handle hidden password elements.
- Redirect to GitLab dashboard.

#### 4. GitLab Navigation (gitlab\_navigation.robot)

- Navigate to Projects.
- Search project using input field.
- Trigger search via ENTER key.
- Select project from dropdown or list.
- Handle subgroup navigation.

#### 5. GitLab Validation (gitlab\_validation.robot)

- Validate correct project page.
- Validate breadcrumbs.
- Validate repository landing page.
- Capture screenshot for results.

#### 6. Full Flow Summary

- Suite Setup runs and attempts token creation.
- Test A executes first.
- Test B always executes after A.
- Test C validates A->B rule.
- UI Login via Okta SSO.
- GitLab project search and navigation.
- UI validation and screenshot capture.

#### 7. XPaths Developed

- Okta password input:

```
//input[@type='password' and contains(@class,'okta-form-input-field')]
```

- GitLab search field:

```
//input[@placeholder='Search your projects']
```

- Flexible project selectors:

```
(  
//a[.//span[contains(., '${PROJECT_NAME}')] ]  
|  
//div[contains(@class,'gl-search-box-results')]/a[.//span[contains(., '${PROJECT_NAME}')] ]  
)
```

## 8. Deliverables Completed

- SSO login automation completed.
- GitLab UI navigation flow automated.
- Subgroup-aware project selection.
- Robust validation logic.
- Test A/B/C suite validation architecture.
- Screenshot functionality.
- Documentation delivered.

## 9. References

- Robot Framework: <https://robotframework.org/>
- SeleniumLibrary: <https://robotframework.org/SeleniumLibrary/SeleniumLibrary.html>
- Okta Developer Docs: <https://developer.okta.com/>
- GitLab Documentation: <https://docs.gitlab.com/>
- Microsoft Edge WebDriver: <https://developer.microsoft.com/en-us/microsoft-edge/tools/webdriver/>
- Python RequestsLibrary: <https://marketsquare.github.io/robotframework-requests/>
- XPath Reference: <https://www.w3.org/TR/xpath/all/>