Selenium with Python: Web Automation Series

Project Overview

Date: April 2025 - Present

Tools: Python, Selenium WebDriver, PyCharm, ChromeDriver, GeckoDriver

This project demonstrates how to use Python with Selenium to automate web browser tasks such as form input, clicking buttons, scraping data, and validating web page behavior. The focus was on setting up a robust cross-browser automation environment and applying core Selenium methods for real-world tasks.

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Key Features & Methods

- Installed and configured Python and PyCharm IDE

- Integrated Selenium WebDriver

- Installed ChromeDriver and GeckoDriver for cross-browser testing

Automation tasks included:

- Opening websites and interacting with UI elements (e.g., search bars, buttons)

- Using find_element and find_elements with locators like:

  * By.ID

  * By.NAME

  * By.CLASS_NAME

  * By.TAG_NAME

- Entering data, clicking buttons, and extracting results

- Validating functionality and printing extracted results like URLs or text

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Key Script Descriptions

* open_ByID.py: Opens a webpage and automates input using element ID

* locate_ByName.py: Locates form elements by 'name' and automates interaction

* locate_ByClassName.py: Uses class names to extract and manipulate elements on the page

These scripts demonstrate how Selenium can be used for automated testing, interaction, and web scraping using Python.