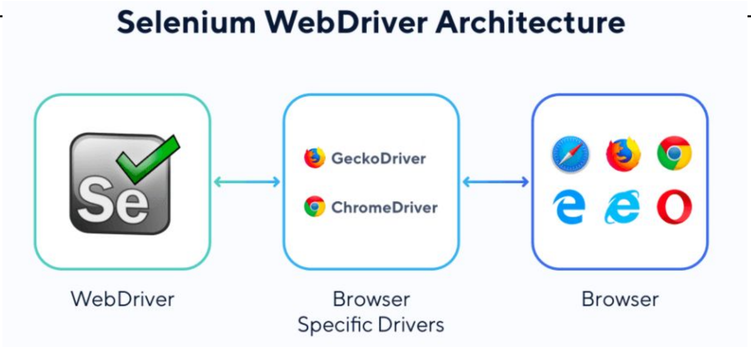
Selenium Webdriver

Open source automation tool used for automating **web-based** application testing.

How to install selenium

- PYTHON - Download Python | Python.org
- SELENIUM - in cmd type - pip install selenium
- WEBDRIVER - https://chromedriver.chromium.org/downloads
- PYCHARM - https://www.jetbrains.com/pycharm/download/#section=windows



Navigation

```
driver.get('URL')
```

Locators

```
Find_element_by_ (id, name, link_text, class_name, css selector, xpath)
```

Actions

```
.send_keys() = to enter input value in a blank
.click()     = to give click command
.clear()     = to clear the input field
.text        = to copy the text
```

CSS Selector (Locator)

FROM	SYNTAX
Attribute & Value	tagname[attribute = ‘value’]
ID	tagname#IDvalue
Class	tagname.classvalue

Note: tagname is optional

To check the uniqueness from console, syntax => **$(“tagname[attribute=’value’]”)**

XPATH (Locator)

FROM	SYNTAX
Attribute & Value	//tagname[@attribute = ‘value’]
text	//tagname[text() = ‘type text here’]
Parents to child	//tagname[@attribute = ‘value’]/tagname
Parents to last child	//tagname[@attribute = ‘value’]/tagname[last()]
Grand parent to child	//tagname[@attribute = ‘value’]/tagname/tagname
Child to any ancestor	//tagname[@attribute = ‘value’]/ancestor::tagname[@attribute = ‘value’]
Starts with	//tagname[starts-with(@attribute,’starting values’)]
contains	//*[contains(@attribute,’value’)]
Starts with and contains	//tagname[starts-with(@attribute,'starting values') and contains(@attribute,’value')]

To check the uniqueness from console, syntax => **$x(“//tagname[@attribute=’value’]”)**

Multiple Checkboxes

Create one xpath which will be common for all checkboxes then use for loop to click all

Static Dropdown (select tagname)

Import Select object, give locator inside it, keep this in one variable and use Select functions

Dynamic Dropdown

Create xpath which will be common for all suggestions, then use for loop to select the particular

Pop up Alert

```
popup = driver.switch_to_alert()
```

File Upload

Locate element with tagname “input” then in the send_keys, give the complete path of the file.

Implicit Wait

driver.implicitly_wait()

Explicit Wait

first import **By**, **expected_conditions** and **WebDriverWait** then use explicit wait with conditions

Mouse Hover, Double-click, Right-click

Import **ActionChains**

Multiple Windows, Tabs

```
driver.switch_to_window(driver.window_handles[x])
```

Frames

driver.switch_to_frame('x'), x can be id value, class value, name value or driver.find_element things also.

Get attribute

```
driver.find_element_by_xpath(" ").get_attribute("attribute name")
```

Pytest Framework

pip install pytest, Python file name & function name should start with test_

Fixtures & Conftest.py

Conftest.py to store the fixture & html report modifications

Pytest Html Report

pip install pytest-html (to download the package) , –html=report.html (to download the report)

Logs (Code on next slide)

Log is defined as records in programming.

```
logger = logging.getLogger()
filehandler = logging.FileHandler("logfile.log")
formatter = logging.Formatter('%(asctime)s: %(levelname)s: %(module)s: %(funcName)s: %(message)s',
datefmt='%d/%m/%Y %I:%M:%S %p')
filehandler.setFormatter(formatter)
logger.addHandler(filehandler)
logger.setLevel(logging.DEBUG)
logger.debug("Debug message")
logger.info("Information regarding the test case")
logger.warning("Test case pass but with a Warning message")
logger.error("Test case fail")
logger.critical("Important test case fail on which other test case depends")
```

Scrolling

driver.execute_script("window.scrollTo(0, X)") => X is the vertical height measured in pixels

driver.execute_script("window.scrollTo(0, document.body.scrollHeight);") => scroll to the last of the page

driver.execute_script("arguments[0].scrollIntoView();", X) => scroll to specific element X

```
y = 1000
    for step in range(0,50):
        driver.execute_script("window.scrollTo(0, "+str(y)+")")
        y += 1000
        time.sleep(1)
```

Pytest Parametrize

@pytest.mark.parametrize('count' ,[1,2,3])