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Aim:- Test driven Development using Selenium.

Selenium:- It is a powerful and open-source suite of tools specifically designed for automating web application testing. It is widely used among software testers due to its versatility, flexibility and several key benefits.

Selinium WebDriver:- This is the core component that allow you to control web browsers via code.

Selenium IDE:- A browser extension that help record and playback interactions with a web application., simplifying test creation for beginners.

Selinium Grid:- Allows you to distribute tests across multiple machines and browsers for parallel execution, ideal for large-scale testing.

Benefits of using Selinium:-

- **Open-Source and free:-** Anyone can use it without licensing cost.
- **Cross-browser testing:-** Supports various browsers for comprehensive testing.

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- Multiple Programming languages :- Integrates with different languages like Python, Java, and Ruby, allowing developers to choose their preferred languages.
- Large community and Support :- Extensive documentation, tutorials, and a helpful community available for assistance.

Steps To config Selenium :-

(1) Install ~~Java~~ JDK
(2) Choose a Programming language.
- I have choosen Python.
(3) Install Selenium libraries or Bindings. using "Pip install selenium"
(4) Downloads Webdrivers.
(5) Set up your testing Environment
(6) write your first code.

Code :-

```
from selenium import webdriver
from selenium.webdriver.common.keys import Keys  // Package import
driver = webdriver.Chrome()  // creating instance
driver.get("https://www.example.com")  // which browser to test
search_box = driver.find_element("name", "q")
search_box.send_keys("selenium testing")  // Action
search_box.send_keys(Keys.Return)

driver.implicitly_wait(5)  // wait to perform action
```

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```
assert "Search Results" in driver.title  // verify the result
Print ("Page Title:", driver.title)  // output the page title
driver.quit()  // close browser window.
```

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