SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING

WINTER SEMESGTER 2020-21

J COMPONENT

SWE-2005 Software Testing

Course Faculty: Prof . Srinivasa Perumal R
Slot: F1+ TF1
Topic: Testing of Website (Wanderlog)

By:
Sabrina Manickam 19MIS0137

Contents

CHAPTER 1: ABOUT THE WEBSITE TO BE TESTED

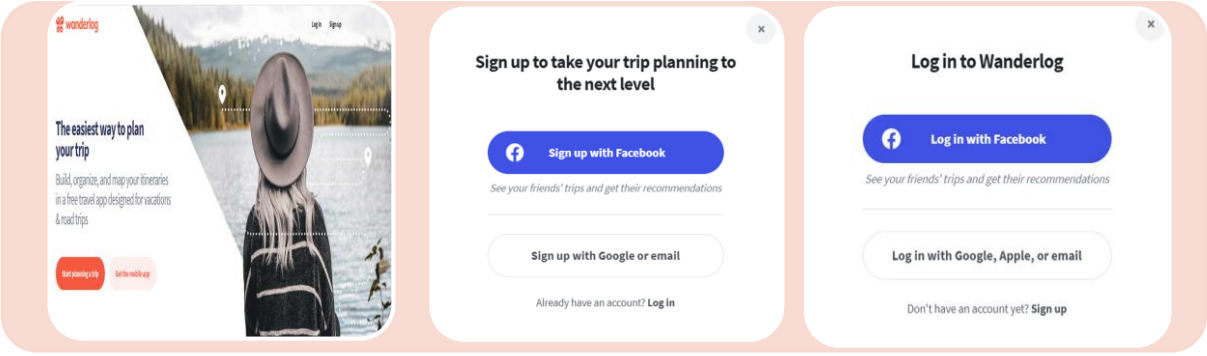
Introduction

Wanderlog, is the easiest-to-use, completely free travel app for planning every kind of trip, including road trips and group travel. You can create a trip itinerary, organize flight and hotel reservations, view places to visit on a map, and collaborate with friends. After your vacation, share a travel guide or trip story to inspire other travelers.

Features of wanderlog

- Easy to Learn and Use
- Auto Generated and User Created Itineraries
- Functionality and App Integration
- Collaborative Trip Planning
- Free of Cost

1. Sign up / log in



The website lets users create and maintain their personal accounts.

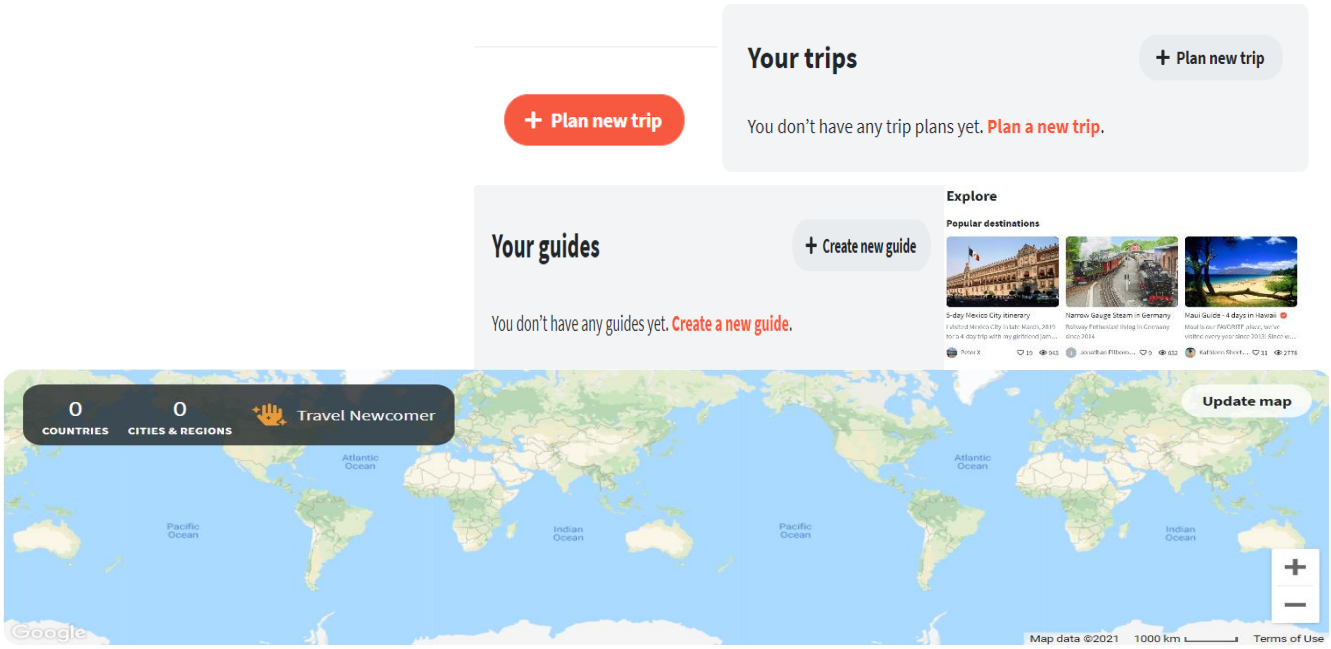
Provisions of creating the account via Facebook or google are provided to the users.

Registered users can log into their accounts where their previous work is saved.

2. Home page

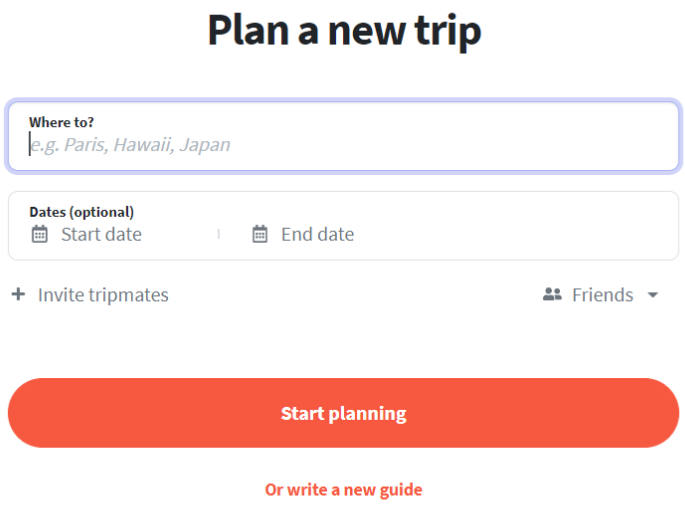
It provides the user with the following features:

1. Plan A New Trip
2. View Previous Trips
3. Create and View Guides
4. A Map to Explore Locations
5. A Tab Explore Popular Places

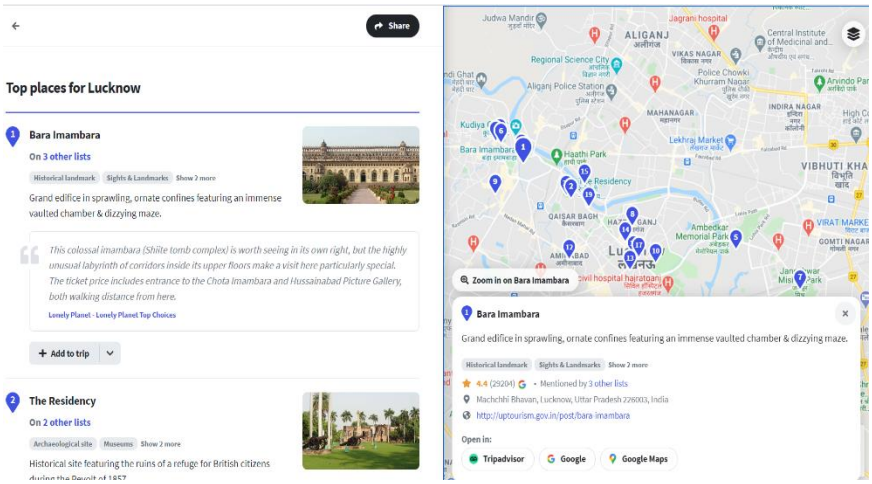


3. Planning a new trip

Wanderlog makes planning a trip easy by letting users choose a destination of their choice , start and end date of their trip and by providing them an option to add their friends in the planning process.

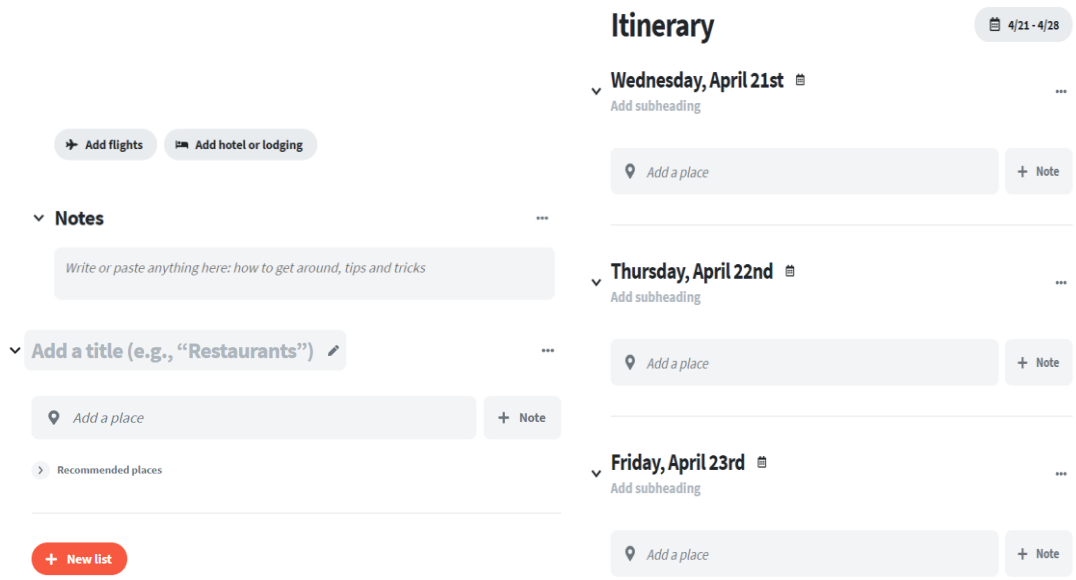


The website allows the users to pick from the top tourist places and view them on Google maps side by side providing an excellent user experience.



4. Additional features

1. Add fights
2. Add hotel and lodging
3. Adding activities for each trip day
4. Making personalized notes
5. Making personalized lists (e.g. Restaurants to visit)



CHAPTER 2: ABOUT THE TESTING TOOL- SELENIUM

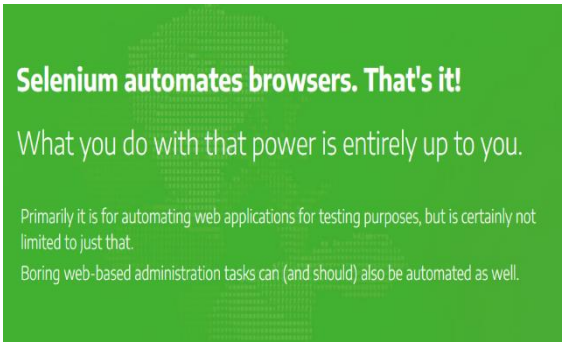
What is Selenium?

Selenium is a free (open-source) automated testing framework used to validate web applications across different browsers and platforms. One can use multiple programming languages like Java, C#, Python etc to create Selenium Test Scripts. Testing done using the Selenium testing tool is usually referred to as Selenium Testing.

Why should we automate testing?

Understanding the need for selenium like software

Test automation has specific advantages for improving the long-term efficiency of a software term's testing processes.



Test automation supports:

- Frequent regression testing
- Rapid feedback to developers
- Virtually unlimited iterations of test case execution
- Support for Agile and extreme development methodologies
- Disciplined documentation of test cases
- Customized defect reporting
- Finding defects missed by manual testing

History of selenium

2004: at ThoughtWorks in Chicago, Jason Huggins built the Core mode as "JavaScript TestRunner" for the testing of an internal Time and Expensesapplication (Python, Plone).

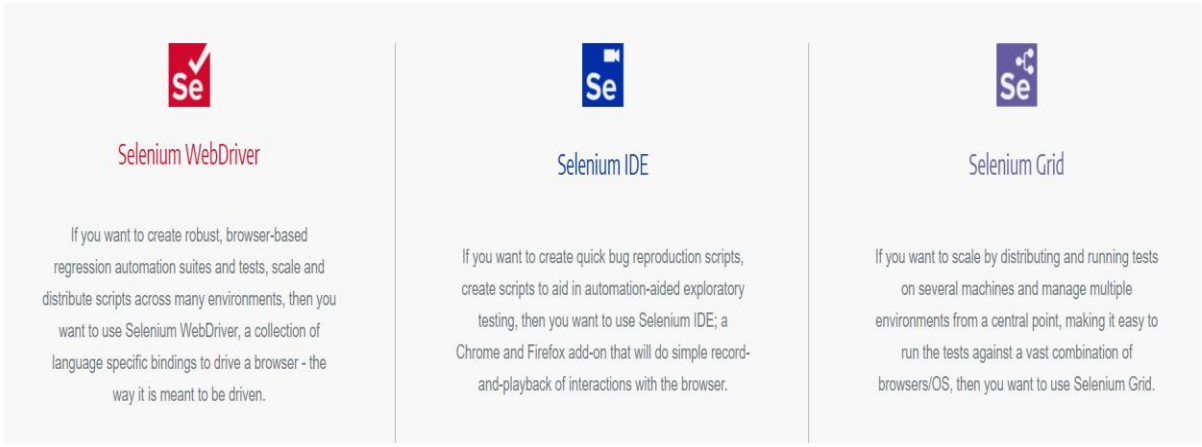
2006: at Google, Simon Stewart started work on a project he called WebDriver. Google had long been a heavy user of Selenium, but testers had to work around the

limitations of the product. The Web Driver project began with the aim to solve the Selenium' pain-points.

2008: merging of Selenium and WebDriver. Selenium had massive community and commercial support, but WebDriver was clearly the tool of the future. The joining of the two tools provided a common set of features for all users and brought some of the brightest minds in test automation under one roof Shinya Kasatani in Japan became interested in Selenium, he Wrapped the core code into an IDE module into the Firefox browser Added the ability to record tests as well as play them back in the same plugin. This tool, turned out an eye opener in more ways that was originally thought as it is not bound to the same origin policy.

The Selenium world

Senelium provides different types of work platforms basic on user's needs:



Selenium IDE

Selenium IDE allows a user or a test case developer to create the test cases and test suites and edit it later as per their requirements. The development environment also provides the capability of converting test cases to different programming languages, which makes it easier for the user and does not mandate the need for knowing a specific programming language.

Web ready
Simple, turn-key solution to quickly author reliable end-to-end tests. Works out of the box for any web app.

Easy Debugging
Enjoy easier test debugging with rich IDE features like setting breakpoints and pausing on exceptions.

Cross-browser Execution
Run your tests on any browser/OS combination in parallel using the Command-line Runner for Selenium IDE.

Features of selenium ide

There are several features provided in the IDE under the toolbar, using which one can control the execution of test cases:

Speed Control – Helps control the speed of test cases

Run All – Allows execution of the entire Test Suite

Run – Runs the currently selected test

Pause/Resume – Allows a user to pause and resume a particular test case

Step – Helps step into each specific command in the test script

Rollup – Helps group all the Selenese Commands together and make them execute as a single operation

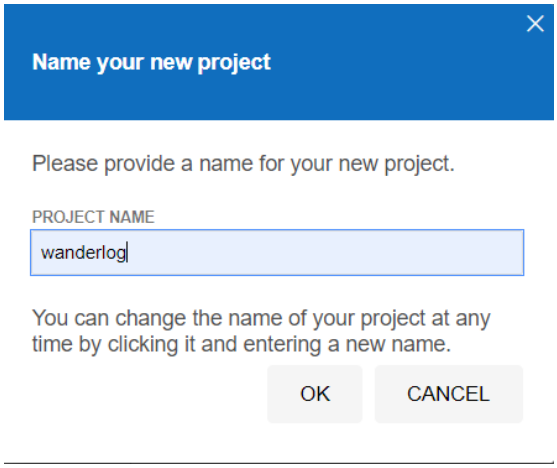
Benefits of using selenium ide

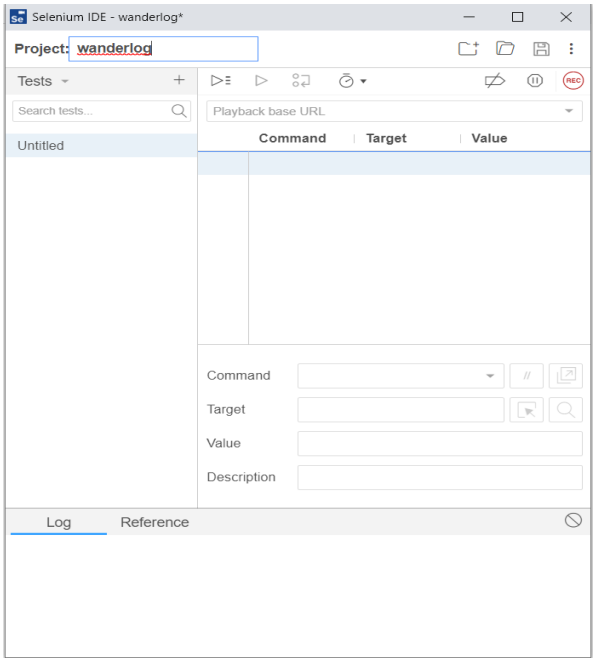
- Provides you the capability of automatically recording your test cases based upon the interactions with the browser
- Gives developers greater flexibility in executing the test cases. Either the test developer can run the entire test suite consisting of multiple test cases or execute a single test case
- Operates on the basis of the rich set of Selenese commands, which helps the IDE understand what needs to be done
- Allows the test developers to set breakpoints for the purpose of debugging particular test cases
- Test cases can be re-used using the run command. (e.g. allowing you to re-use the logic of login or reload on multiple places in the entire suite)
- Use of multiple-locators for each element in the IDE ensures successful execution

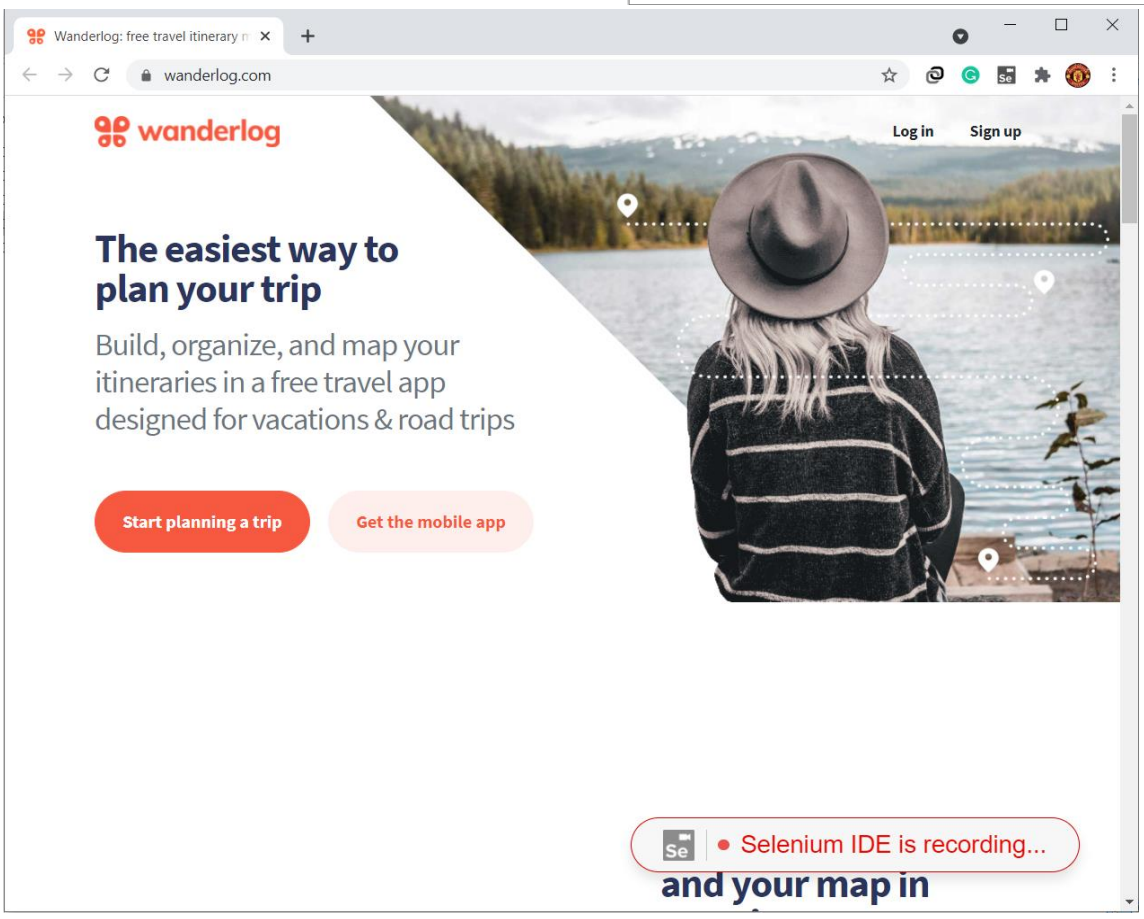
Limitations of selenium ide

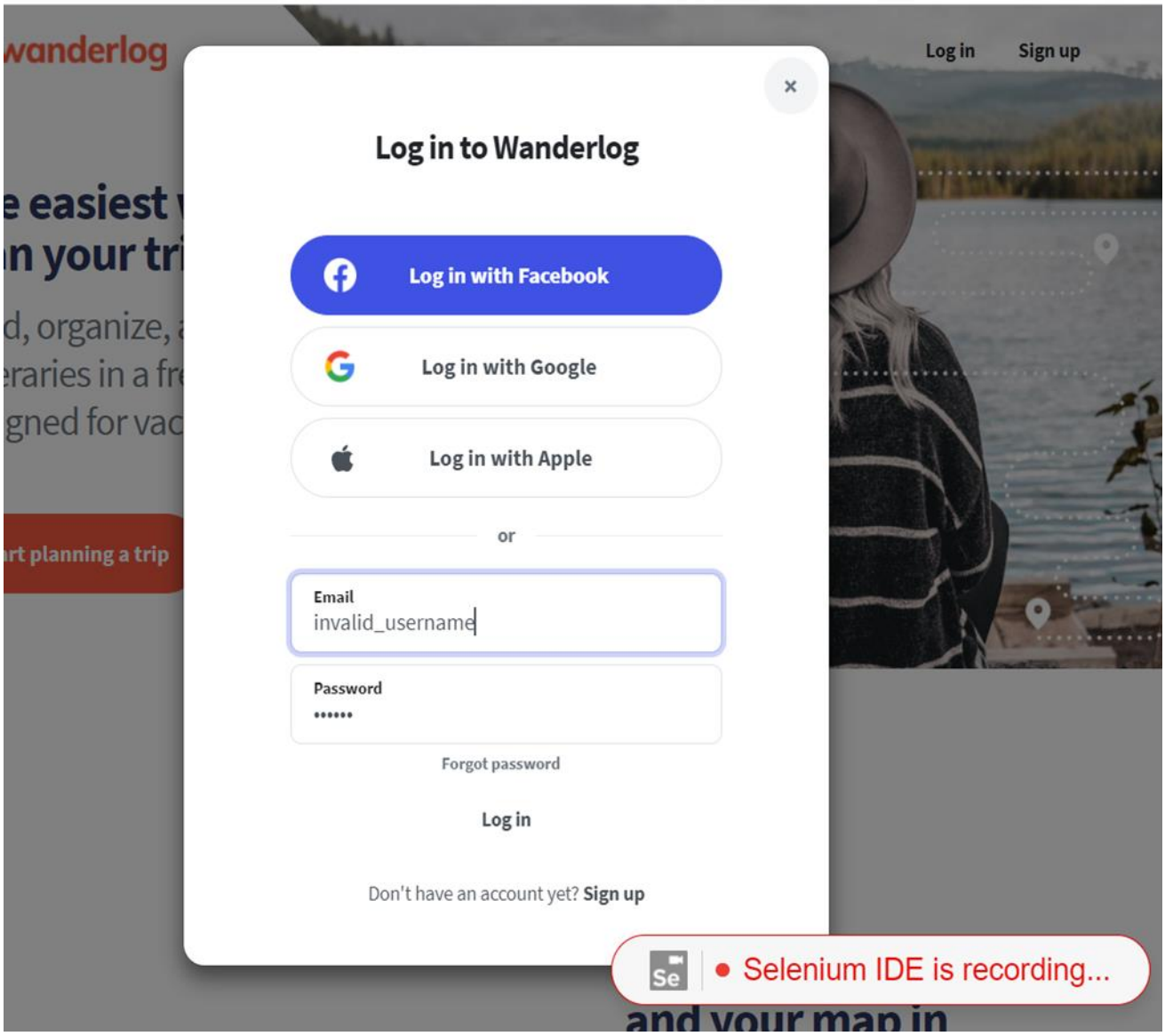
- Not suitable for testing extensive data
- Connections with the database can not be tested
- Cannot handle the dynamic part of web-based applications
- Does not support capturing of screenshots on test failures
- No feature available for generating result reports

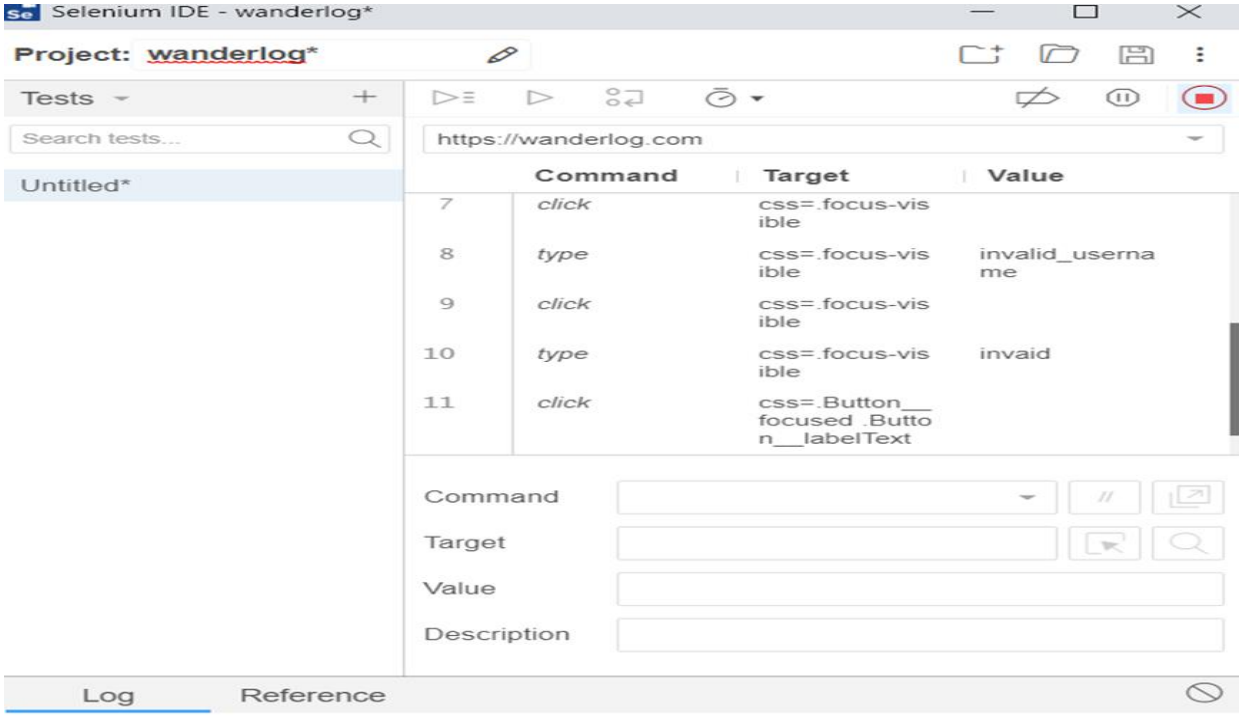
Creating test case using selenium

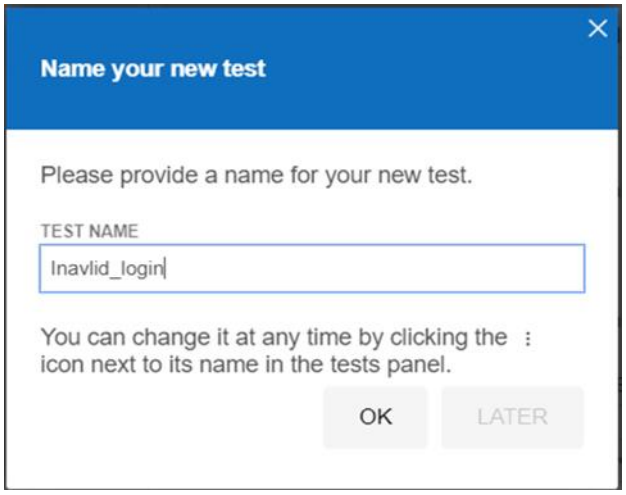


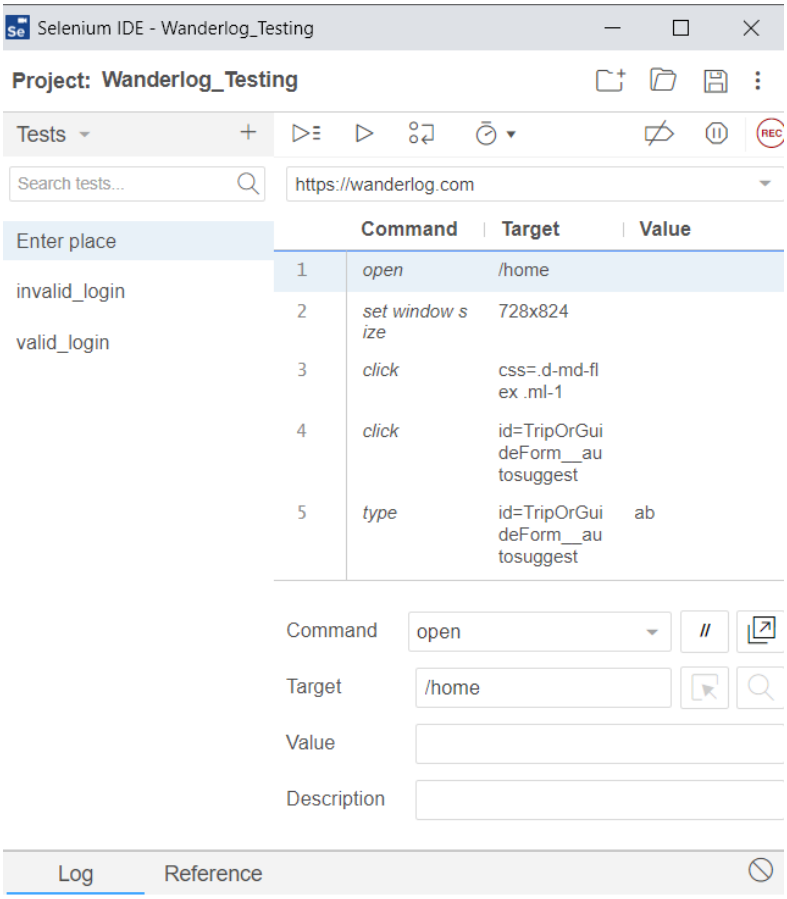





wanderlog
Log in
Sign up
Log in to Wanderlog
Log in with Facebook
Log in with Google
Log in with Apple
or
Email
invalid_username
Password
Forgot password
Log in
Don't have an account yet? Sign up
Selenium IDE is recording...


Selenium IDE - wanderlog*
Project: wanderlog*
Tests
Search tests...
Untitled*
https://wanderlog.com
Command
Target
Value
7 click css=.focus-visible
8 type css=.focus-visible invalid_username
9 click css=.focus-visible
10 type css=.focus-visible invaid
11 click css=.Button__focused .Button__labelText
Command
Target
Value
Description
Log
Reference


Name your new test
Please provide a name for your new test.
TEST NAME
Inavlid_login
You can change it at any time by clicking the ⋮ icon next to its name in the tests panel.
OK
LATER


Selenium IDE - Wanderlog_Testing
Project: Wanderlog_Testing
Tests
Search tests...
Enter place
invalid_login
valid_login
https://wanderlog.com
Command
Target
Value
1
open
/home
2
set window size
728x824
3
click
css=.d-md-flex .ml-1
4
click
id=TripOrGuideForm__autosuggest
5
type
id=TripOrGuideForm__autosuggest
ab
Command
open
Target
/home
Value
Description
Log
Reference

CHARTER 3: TESTING USING SELENIUM

Web Driver Testing Code:

```
package wanderlog_testing;
import java.util.concurrent.TimeUnit;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;
public class Fist {
	WebDriver driver;
	JavascriptExecutor js;
	//Getting browser ready and opening website
	public void invokeBrowser()
	{try {
			System.setProperty("webdriver.chrome.driver",
"C:\\Users\\HP\\Desktop\\chromedriver.exe");
			driver=new ChromeDriver();
			driver.manage().deleteAllCookies();
			driver.manage().window().maximize();
			driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
			driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
			driver.get("https://wanderlog.com/home");
			travel_guide();				//Module to test
TRAVELNGUIDESFUNCTIONALITY
		} catch (Exception e) {
			e.printStackTrace();
		}
	}
```

```
public void travel_guide()
	{
		int i;
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}	//start planning button
		driver.findElement(By.className("Button__labelText")).click();
		try {
			Thread.sleep(4000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}//travel guides button
	driver.findElement(By.xpath("/html/body/div[1]/nav/div/div/div/ul/li[2]/a")).click();
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}

		driver.findElement(By.id("GuidesPage__autosuggest")).sendKeys("Paris");
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}

	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div[1]/div[2]/div/div/div[2]/ul/li[1]")).clic
k(); //enter place
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}

	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div[2]/div[2]/div[1]/div/div[1]/div/div[1]/
a")).click(); //top places button
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		//scrolling down
		js=(JavascriptExecutor)driver;
		for(i=0;i<5;i++)
		{
			try {
				Thread.sleep(3000);
			} catch (InterruptedException e) {

				e.printStackTrace();
			}

		js.executeScript("window.scrollBy(0,250)", "");
		}
		trip_planning();		// Testing TRIP PLANNING Functionality
	}
```

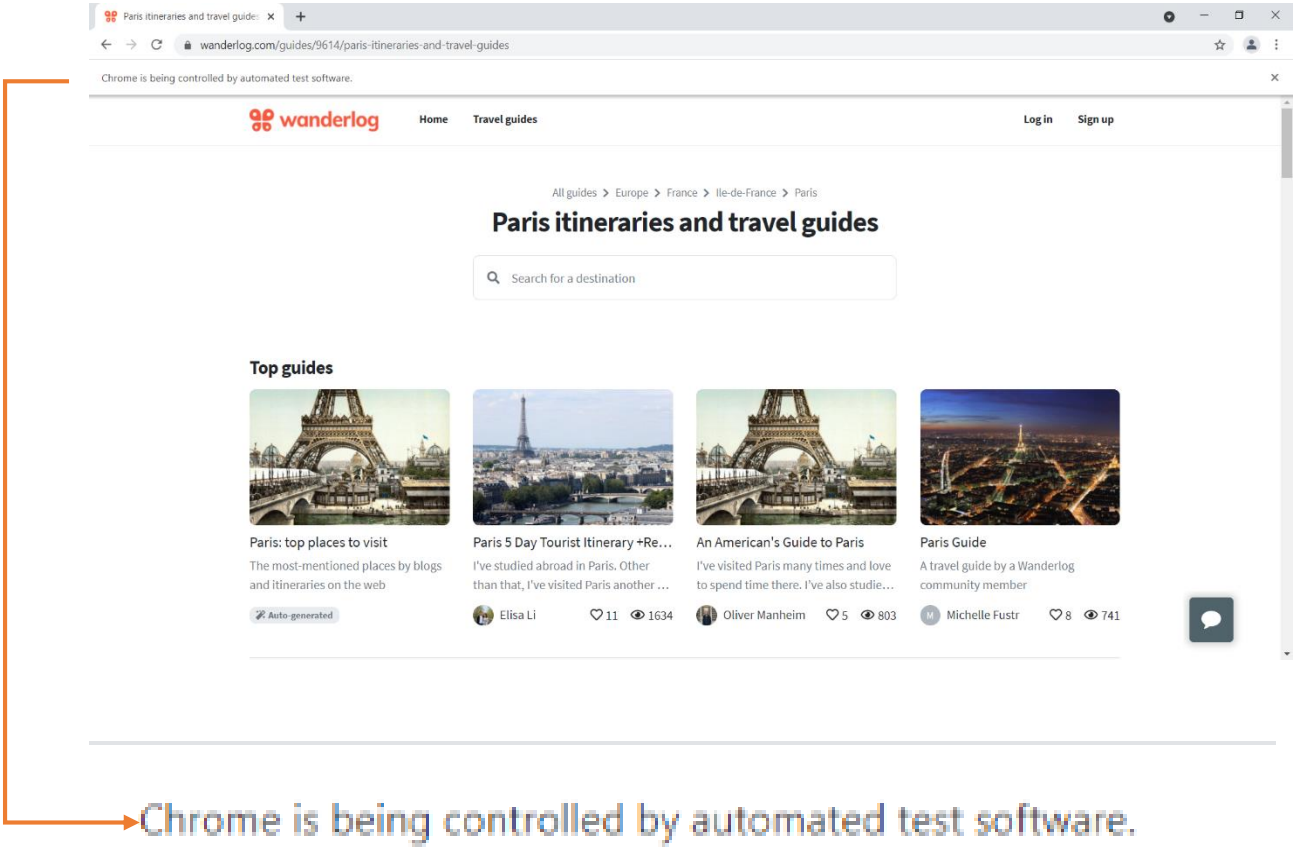
```
public void trip_planning()
	{
		try {
			Thread.sleep(10000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		driver.manage().deleteAllCookies();
		driver.manage().window().maximize();
		driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
		driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);

		driver.get("https://wanderlog.com/home");
		//start panning
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		driver.findElement(By.className("Button__labelText")).click();

		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		//select and enter place
		driver.findElement(By.id("TripOrGuideForm__autosuggest")).sendKeys("Seoul");

		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		//enter place
		driver.findElement(By.className("InputContainer__rightButton")).click();
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
		//for date
		driver.findElement(By.className("InputDateRangePicker__icon")).click();
		try {
			Thread.sleep(3000);
		} catch (InterruptedException e) {

			e.printStackTrace();
		}
```

```
//select start date and end date
	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div/div/div[2]/form/div[2]/div/div[1]/div[2]/div/div/div/div[2]/div/div/div[1]/div[2]/div[2]/div/div[2]/div/table/tbody/tr[2]/td[4]")).click();
	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div/div/div[2]/form/div[2]/div/div[1]/div[2]/div/div/div/div[2]/div/div/div[1]/div[2]/div[2]/div/div[2]/div/table/tbody/tr[3]/td[4]")).click();
			try {
				Thread.sleep(3000);
			} catch (InterruptedException e) {

				e.printStackTrace();
			}//enter start planning button
	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div/div/div[2]/form/button[1]/div/div/span")).click();
			try {
				Thread.sleep(3000);
			} catch (InterruptedException e) {

				e.printStackTrace();
			}//skip login
	driver.findElement(By.xpath("/html/body/div[5]/div/div[1]/div/div/div/div/div[2]/div/button[2]/div/div/span")).click();
			try {
				Thread.sleep(4000);
			} catch (InterruptedException e) {

				e.printStackTrace();
			}
driver.findElement(By.xpath("/html/body/div[1]/div[3]/div[1]/div/div/div[2]/div/div[3]/div[1]/button")).click();

driver.findElement(By.xpath("/html/body/div[1]/div[3]/div[2]/div[2]/div[2]/div/div[1]/div/div/div/div/div/div/div/div/div/div[2]/ul/li[2]/div/div[1]/div[2]/span")).click();try {
				Thread.sleep(4000);
			} catch (InterruptedException e) {

				e.printStackTrace();
			}
driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div/div[2]/div[2]/div[1]/div/div/div[2]/div/div/div/div[1]/div/div/div/span/div/div/div/div[1]/button[2]/div/div/span/div/span")).click();
				for(int i=0;i<5;i++)
				{
					try {
						Thread.sleep(3000);
					} catch (InterruptedException e) {

						e.printStackTrace();
					}

				js.executeScript("window.scrollBy(0,250)","this.js");
				}

	driver.findElement(By.xpath("/html/body/div[1]/div[2]/div/div/div[2]/div[2]/div[1]/div/div/div[2]/div/div/div/div[2]/div/div/div/span/div/div/div/div[1]/button[2]/div/div/span/div/span")).click();
```

```
try {
                                Thread.sleep(4000);
                        } catch (InterruptedException e) {

                        e.printStackTrace();
                        }
        }

        public static void main(String []args)
        {
                Fist obj=new Fist();
                obj.invokeBrowser();


        }
}
```

The automation testing software can also enter test data into the System Under Test, compare expected and actual results and generate detailed test reports. Software Test Automation demands considerable investments of money and resources.

The code above runs the testing of various website elements in an automated fashion.



Chrome is being controlled by automated test software.

CHAPTER 4: REFERENCES

- **Website link:** https://wanderlog.com/
- **Selenium tools suite:** https://www.selenium.dev/downloads/
- **Chrome Driver:** https://chromedriver.chromium.org/downloads
  For code:
- https://stackoverflow.com/questions/12293158/page-scroll-up-or-down-in-selenium-webdriver-selenium-2-using-java
- https://www.edureka.co/blog/automation-testing-tutorial/
- https://www.browserstack.com/guide/wait-commands-in-selenium-webdriver#:~:text=Explicit%20Wait%20in%20Selenium,take%20more%20time%20to%20load.
- https://www.browserstack.com/guide/understanding-selenium-timeouts
- https://www.edureka.co/community/54232/descriptor-selenium-selenium-standalone-provider-bsfmanager