Inside directory, you can run several commands:

npm playwright -v //to check version

npm playwright -help

npm init playwright@latest \\to run playwright

**npx playwright test** Runs the end-to-end tests.

npx playwright show-report

npx playwright test --workers 3 \\run all tests in 3 configured browsers at once

npx playwright test ./tests/example.spec.js \\execute only this test

npx playwright test ./tests/example \\execute all tests with “example” in file name

npx playwright test -g “has title“ \\execute test by test name

npx playwright test --project=chromium \\execute only on chromium

npx playwright test –project chromium --headed \\you can see how Playwright use browser

**npx playwright test alza.spec.js --headed --project="chromium" --config=../playwright.config.js**  [\\run](file:///\\run) with specific config file

**npx playwright test --list --config=../playwright.config.js** //validate loaded config

**npx playwright test --headed //**you can see how Playwright use browser  
**npx playwright test --headed --project chromium**

https://playwright.dev/docs/running-tests#run-tests-in-headed-mode

**npx playwright test --project=chromium --debug** [\\run](file:///\\run) test with playwright inspector

npx playwright test .\tests\example.spec.js --debug

npx playwright test example.spec.js:12 --project=chromium --debug [\\debug](file:///\\debug) specific test on specific line(12)

npx playwright show-report

npx playwright test –ui // Starts the interactive UI mode.

npx playwright test --project=chromium //Runs the tests only on Desktop Chrome.

npx playwright test example

Runs the tests in a specific file.

npx playwright test --debug

Runs the tests in debug mode.

npx playwright codegen

Auto generate tests with Codegen.

We suggest that you begin by typing:

npx playwright test

And check out the following files:

- .\tests\example.spec.ts - Example end-to-end test

- .\tests-examples\demo-todo-app.spec.ts - Demo Todo App end-to-end tests

- .\playwright.config.ts - Playwright Test configuration

Visit https://playwright.dev/docs/intro for more information. ✨

**Run Browser maximized**

In **playwright.config.js** The deviceScaleFactor is implicitly added by ...devices['Desktop Chrome']. To fix this, **override it explicitly** by removing it after the spread:

use: {

...devices['Desktop Chrome'],

deviceScaleFactor: undefined, // Remove deviceScaleFactor

viewport: null, // Disable viewport resizing (maximize)

launchOptions: {

args: ['--start-maximized'], // Start maximized

},

headless: false, // Ensure headed mode

},

**CODEGEN**

npx playwright codegen --help

npx playwright codegen

npx playwright codegen <https://www.alza.sk/>

npx playwright codegen <https://www.saucedemo.com>

npx playwright codegen --browser firefox

or

npx playwright codegen --browser ff

npx playwright codegen --target javascript -o .\tests\record\_demo.specs.js

npx playwright codegen --target javascript -o record\_demo.specs.js

[\\opened](file:///\\opened) recorder will save script to the defined file in javascript

npx playwright codegen --viewport-size=800,600 [\\run](file:///\\run) with defined resolution

npx playwright codegen --device=”iPhone 14”

console.log(await page.viewportSize()); // Log the viewport size for debugging

npx playwright test iphone14.spec.js --headed --project="chromium" --config=../playwright.config.js

npx playwright codegen --device=”iPhone 14” --color-scheme=dark playwright.dev

**await page.pause() //setting this step into the test will start Playwright inspector on specific step**

**TRACE VIEWER**

playwright.spec.js option: **trace**: 'on-first-retry',

//retries: process.env.CI ? 2 : 0, -commented

retries: 1,

**trace** can also be set to **on, off, retain-on-failure** (only failed)

**npx playwright test --trace on** [\\can](file:///\\can) set in every run

how to decrease default wait timeout - playwright.spec.js - timeout: 10 \* 1000, timeout: 3000

npx playwright test saucedemo1.spec.js --headed --project="chromium" --config=../playwright.config.js

When report is shown after test (or npx playwright show-report), **check Retry tab, at the bottom are “Traces”,** click on and open Trace viewer

or open .zip in “test-results” folder: npx playwright show-trace .\test-results\saucedemo1-saucedemo1-chromium-retry1\trace.zip

trace.playwright.dev [\\open](file:///\\open) trace file manually

to track specific part of test

test('has title', async ({ page, context }) => {  
await context.tracing.start({snapshots: true, screenshots: true})

//test code

await context.tracing.stop({path: 'test1.zip'});

npx playwright show-trace .\test1\_trace.zip //to run trace

**Initial commands**

**import { test, expect } from '@playwright/test';**

The **@playwright/test** package is a testing framework provided by Playwright (it use NODEJS), which allows you to write and execute end-to-end tests for web applications. It is a built-in test runner for Playwright that simplifies the setup, execution, and reporting of browser automation tests. When you see the command import { test, expect } from '@playwright/test', you're importing:

1. **test**: A function used to define a test case. It typically contains assertions to verify the behavior of the application.
2. **expect**: A built-in assertion library that allows you to perform checks, such as verifying if an element is visible, contains a certain text, or matches a condition.

Another popular test runners **Jest**, **Mocha**, **Pytest, Cypress, TestCafe**

**“old CommonJS way”**

**const { test, expect } = require('@playwright/test');**

**-** This is CommonJS syntax, which was the standard way to handle modules in Node.js before **ES Modules** became popular.

import { beforeAll, beforeEach, afterAll, afterEach, expect } from '@playwright/test';

These are lifecycle hooks that you can use to set up or clean up test states before or after tests run. They are useful for repeating setup steps or cleanup tasks.

**Selectors and Locators**

**Using any object property**

https://playwright.dev/docs/api/class-locator

await page.pause() //open playwright inspector in specific step

 await page.click('id=user-name')

 await page.locator('id=user-name').fill(Edison)

or

await page.locator('[id=“user-name“]').fill(Graham)

**Wait for secelector**

await page.locator(‚text=Sign in‘).click()

await page.waitForSelector(‚text=Sign in‘,{timeout: 4000})

await expect(page.locator(‚text=Sign in‘)),toHaveCount(1)

**CSS Selector**

copy from dev tool

A screenshot of a computer

Description automatically generated

**xpath**

//textarea[@name="q"]

A screenshot of a computer

Description automatically generated

  await page.locator('xpath=//input[@id="user-name"]').fill('Faraday')

  await page.locator('//input[@id="user-name"]').fill('Ramujan')

**TEXT**  // using Text

  await page.locator('text=LOGIN').click()

  await page.locator('input:has-text("LOGIN")').click(); //here we can define „type“ of element with input:

**ASSERTIONS**

import test, { expect } from '@playwright/test';

test('Assertion Demo', async ({ page }) => {})

**async ({ page }) => {...} is an asynchronous function that runs your test logic. page is automatically injected into your test function by Playwright, and it allows you to interact with the browser page.**

**Click if element present**

  if (await page.$('heading', { name: 'The Kitchen' })) {

        await page.getByRole('heading', { name: 'The Kitchen' }).click()

// without if  
await expect(page.getByRole('heading', { name: 'The Kitchen' })).toHaveCount(1)

// soft assertion / it is continuing after element is/not found  
 await expect.soft(page.getByRole('heading', { name: 'The Kitchen' })).toBeHidden()

**check text**

await expect(page.getByRole('heading', { name: 'The Kitchen' })).toHaveText('The Kitchen')

await expect(page.getByRole('heading', { name: 'The Kitchen' })).not.toHaveText('The Kitchen')

**check attribute value**

await expect(page.locator('selector')).toHaveAttribute('class', /.\*value/)

await expect(locator).toHaveClass(/.\*value/);

with class value

await expect(page.locator('text='The Kitchen')).toHaveAttribute('class', ‘chakra-heading css-dpmy2a’)

await expect(page.locator('The Kitchen')).toHaveAttribute('class', /.\*css-dpmy2a/)

’**/.\*’ is ‘any’ value before string**

A screenshot of a computer

Description automatically generated

//another way with class

await expect(page.locator('text=The Kitchen')).toHaveAttribute('class', /.\*css-dpmy2a/)

// case insensitive regex

await expect(page.locator('text=The Kitchen')).not.toHaveText(**/The Kitchen/i);**

**Check URL**

await expect(page).toHaveURL('https://kitchen.applitools.com/')

await expect(page).toHaveURL(/kitchen.applitools.com/) //Partial URL checks

await expect(page).toHaveTitle(/.\*Kitchen/);

**Visual validation with screenshot**

  await expect(page).toHaveScreenshot()

* in first it always fail if you don’t upload screenshot or run again (it use screenshot from run before)

**Slow Motion**

in playwright.config.js

 use: {

**video:'on',**

    launchOptions: {

**slowMo: 1000**

      //1000=1second - all actions slowed by 1sec.

A screenshot of a test

Description automatically generated

video is stored in “test results” folder and can also find in test report

https://playwright.dev/docs/api/class-browsertype

**LOOPS**

for (let i = 0; i < 3; i++) {

// Code to repeat goes here

}

**Actions over elements**

| **Action** | **Method** | **Description** |
| --- | --- | --- |
| **Clicking Elements** | locator.click() | Clicks on an element. |
|  | page.click() | Clicks on a page element directly, often requiring a selector. |
| **Typing into Inputs** | locator.type() | Types text into an input field. |
|  | page.type() | Types text into an input field directly via a selector. |
| **Hovering** | locator.hover() | Moves the mouse over an element. |
|  | page.hover() | Hover over an element on the page via a selector. |
| **Checking and Unchecking** | locator.check() | Checks a checkbox or radio button. |
|  | locator.uncheck() | Unchecks a checkbox or radio button. |
| **Selecting Options** | locator.selectOption() | Selects an option from a <select> dropdown. |
|  | page.selectOption() | Selects an option from a dropdown using a selector. |
| **Filling Forms** | locator.fill() | Fills an input field with a specified value. |
|  | page.fill() | Fills an input field directly via a selector. |
| **Pressing Keys** | locator.press() | Simulates pressing a key (e.g., ENTER, ESC) on a web element. |
|  | page.press() | Simulates pressing a key directly on an element via selector. |
| **Clearing Inputs** | locator.clear() | Clears the content of an input field. |
| **Dragging and Dropping** | locator.dragTo() | Drags an element to a target location. |
| **Waiting for Elements** | locator.waitFor() | Waits for an element to meet a specific condition (e.g., visible, attached). |
| **Action** | Example Code | Description |
| **Click** | element.click(); | Simulates a click action on a web element. |
| **Send Keys (Typing)** | element.sendKeys("Test Input"); | Types the specified text into an input field. |
| **Get Text** | String text = element.getText(); | Retrieves the visible text of a web element. |
| **Mouse Hover** | Actions action = new Actions(driver); action.moveToElement(element).perform(); | Hovers the mouse over a specific element using the Actions class. |
| **Double Click** | Actions action = new Actions(driver); action.doubleClick(element).perform(); | Performs a double-click on a web element using the Actions class. |
| **Right Click (Context)** | Actions action = new Actions(driver); action.contextClick(element).perform(); | Opens the context menu by right-clicking on an element. |
| **Drag and Drop** | action.dragAndDrop(source, target).perform(); | Drags one element and drops it onto another. |
| **Select Option** | Select select = new Select(dropdown); select.selectByVisibleText("Option Text"); | Selects a value from a dropdown by visible text. |
| **Get Attribute** | String value = element.getAttribute("attributeName"); | Fetches the value of a specified attribute from the element. |
| **Wait for Element** | WebDriverWait wait = new WebDriverWait(driver, 10); wait.until(ExpectedConditions.elementToBeClickable(locator)); | Waits until a condition (e.g., element clickable) is met before proceeding. |