

How to Handle Keyboard Actions in Playwright

To perform keyboard actions in Playwright, we use the built-in `keyboard` class. This class provides methods to simulate keyboard interactions with web pages. There are two primary methods for handling keyboard actions:

Key Methods in the Keyboard Class

1. **press** – Use the `press` method when you want to simulate pressing a combination of keys.
Example: To copy text using the keyboard, we use `Control+C`.
2. **down and up** – Use `down` or `up` when you want to perform a single key action, such as pressing the **Tab** key.
Example: To press the **Tab** key, you would use the `down` method to simulate pressing the key and `up` to release it.

Example Scenarios for Keyboard Actions

1. Copy-Paste Scenario

Let's go through a scenario where we need to fill out two input fields and simulate a **copy-paste** operation.

Steps:

1. **Fill the first input field** with the text "Yogesh".
2. **Select the text** using keyboard actions:
 - Use the `press` method to press `Control+C` (copy the text).
 - Next, use the `down` method to simulate pressing the **Tab** key to move to the next input field.
 - Use the `up` method to release the **Tab** key after the cursor moves.
3. **Paste the copied text** into the second input field:
 - Use the `press` method again, but this time for `Control+V` to paste the copied text.

Example DOM:

```
<input id="textField1" type="text" placeholder="Enter text">  
<input id="textField2" type="text" placeholder="Paste here">
```

Code Example:

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

test('Keyboard actions - Copy-Paste', async ({ page }) => {
  await page.goto('https://example.com');

  // Fill the first input field with text 'Yogesh'
  await page.fill('#textField1', 'Yogesh');

  // Perform keyboard actions
  await page.keyboard.press('Control+C'); // Copy the text
  await page.keyboard.down('Tab');        // Press Tab to move to the next
field                                     field
  await page.keyboard.up('Tab');           // Release the Tab key

  // Paste the copied text into the second input field
  await page.keyboard.press('Control+V'); // Paste the text
});
```

2. Enter Key Scenario

In this scenario, we will simulate pressing the **Enter** key to submit a form.

Steps:

1. **Fill out a text field.**
2. **Simulate pressing the Enter key** to submit the form.

Example DOM:

```
<input id="textField1" type="text" placeholder="Enter text">
<button id="submitBtn">Submit</button>
```

Code Example:

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

test('Keyboard actions - Enter Key', async ({ page }) => {
  await page.goto('https://example.com');

  // Fill the input field with text
  await page.fill('#textField1', 'Test Data');

  // Press the Enter key to submit the form
  await page.keyboard.press('Enter');
});
```

3. Arrow Key Navigation

This scenario will simulate navigating through a list of options using the **Arrow** keys.

1. **Simulate pressing the Down Arrow key** to navigate down through a list.
2. **Simulate pressing the Up Arrow key** to navigate up.

Example DOM:

```
<select id="dropdown">
  <option>Option 1</option>
  <option>Option 2</option>
  <option>Option 3</option>
</select>
```

Code Example:

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

test('Keyboard actions - Arrow Keys', async ({ page }) => {
  await page.goto('https://example.com'); // Replace with your target URL

  // Focus on the dropdown field
  await page.click('#dropdown');

  // Navigate down through the options using the Down Arrow key
  await page.keyboard.press('ArrowDown');

  // Navigate up through the options using the Up Arrow key
  await page.keyboard.press('ArrowUp');
});
```

4. Backspace Scenario

This scenario will simulate the **Backspace** key to delete text from an input field.

1. **Fill the input field** with text.
2. **Simulate pressing the Backspace key** to delete the text.

Example DOM:

```
<input id="textField" type="text" placeholder="Enter text">
```

Code Example:

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

test('Keyboard actions - Backspace', async ({ page }) => {
  await page.goto('https://example.com');

  // Fill the input field with text
  await page.fill('#textField', 'Text to delete');

  // Simulate pressing the Backspace key to delete the text
  await page.keyboard.press('Backspace');
});
```

5. Shift + Arrow Key Selection

In this scenario, we will simulate holding down the **Shift** key while using the **Arrow** keys to select text.

Steps:

1. **Fill the input field** with text.
2. **Simulate holding down the Shift key** and using the **Arrow** key to select the text.

Example DOM:

```
<input id="textField" type="text" placeholder="Select text">
```

Code Example:

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

test('Keyboard actions - Shift + Arrow Key', async ({ page }) => {
  await page.goto('https://example.com'); // Replace with your target URL

  // Fill the input field with text
  await page.fill('#textField', 'Text to select');

  // Simulate holding Shift and pressing Arrow Right to select text
  await page.keyboard.down('Shift');
  await page.keyboard.press('ArrowRight');
  await page.keyboard.up('Shift');
});
```

Summary of Keyboard Methods:

- **keyboard.press(key: string):** Simulates pressing a key or a combination of keys (e.g., Control+C, Enter).
 - **keyboard.down(key: string):** Simulates pressing a single key (e.g., **Tab**, **Arrow** keys, **Shift**).
 - **keyboard.up(key: string):** Simulates releasing a single key (e.g., **Tab**, **Shift**).
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