**Chapter 2: Prerequisites for Using Playwright**

Before you start using Playwright for end-to-end testing, ensure that you have the following prerequisites in place:

**1. Code Editor**

A good code editor or Integrated Development Environment (IDE) is essential for writing and managing your Playwright test scripts. Popular choices include:

* **Visual Studio Code (VS Code):** A widely used, lightweight code editor with robust support for TypeScript and JavaScript, extensions for Playwright, and integrated terminal.
* **WebStorm:** A feature-rich IDE from JetBrains, offering built-in support for TypeScript, JavaScript, and Playwright.

**2. Node.js**

Playwright is a Node.js library, so you need to have Node.js installed on your system. Follow these steps to install Node.js:

* **Download and Install Node.js:**
  1. Visit the [Node.js official website](https://nodejs.org/).
  2. Download the LTS (Long Term Support) version for your operating system.
  3. Run the installer and follow the prompts to complete the installation.
* **Verify Installation:** Open a terminal or command prompt and run:

bash

node -v

npm -v

Ensure that both Node.js and npm (Node Package Manager) are installed and available.

**3. Package Manager**

* **npm (Node Package Manager):** Comes bundled with Node.js. It is used to install Playwright and other dependencies.
* **Yarn (Optional):** An alternative package manager that you can use instead of npm. If you prefer Yarn, install it by running:

bash

npm install -g yarn

**4. Playwright Dependencies**

* **Install Playwright and Browsers:** Create a new project directory and navigate to it:

bash

mkdir playwright-project

cd playwright-project

Initialize a new Node.js project:

bash

npm init -y

Install Playwright and its browser dependencies:

bash

npm install playwright

npx playwright install

Alternatively, if using Yarn:

bash

yarn add playwright

npx playwright install

**5. Path Setup**

While Node.js installation typically sets up the necessary environment variables, you may need to configure paths manually in some cases:

* **Windows:**
  1. Press Win + X and select "System."
  2. Click "Advanced system settings."
  3. In the "System Properties" window, click the "Environment Variables" button.
  4. In the "System variables" section, find the Path variable, and click "Edit."
  5. Ensure that the path to your Node.js installation (e.g., C:\Program Files\nodejs\) is included. If not, add it.
* **macOS/Linux:**
  1. Open a terminal.
  2. Edit your shell profile file (.bashrc, .bash\_profile, .zshrc, etc.) using a text editor (e.g., nano ~/.bashrc).
  3. Add the following line if it's not already present:

bash

export PATH=$PATH:/usr/local/bin

* 1. Save the file and apply the changes:

bash

source ~/.bashrc

* 1. Verify the path setup by running:

bash

which node

which npm

**6. Additional Tools**

* **TypeScript (Optional):** If you prefer writing tests in TypeScript, install TypeScript and Playwright types:

bash

npm install typescript @types/node --save-dev

npx tsc --init

By ensuring that these prerequisites are met, you'll be ready to start writing and running Playwright tests effectively.