**Project Setup, Compilation, and Execution Guide**

**Prerequisites**

**Required Tools and Dependencies**

1. **Microsoft Edge WebDriver**
   * Download the Edge WebDriver: <https://developer.microsoft.com/en-us/microsoft-edge/tools/webdriver/>
   * Ensure the driver matches the version of Edge installed on your system.
   * Place the downloaded msedgedriver.exe in the directory specified in the code or update the path variable in the project:
   * var edgeDriverPath = @"C:\msedgedriver.exe";
2. **IPFS Desktop**
   * Download IPFS Desktop: <https://github.com/ipfs/ipfs-desktop/releases>
   * Install and run IPFS Desktop.
   * Navigate to the **API settings** (under Options in the app).
     + Add the local host address (e.g., http://localhost:<port\_number>) to the API section.
3. **Ganache**
   * Download Ganache: <https://trufflesuite.com/ganache/>
   * Install and start Ganache.
   * Create a new workspace or use the default one.
4. **Remix IDE**
   * Access Remix IDE: <https://remix.ethereum.org/>
   * Alternatively, download the desktop version: <https://github.com/ethereum/remix-desktop/releases>
5. **Ethereum Development Frameworks**
   * Install the .NET Framework to run the project if not already installed.
   * Install the following NuGet packages:
     + Nethereum.Web3
     + Ipfs.Engine
     + OpenQA.Selenium

**Step-by-Step Setup**

**1. Set Up Edge WebDriver**

1. Download the WebDriver for Edge.
2. Place the msedgedriver.exe in the path specified in the project code.
3. If you change the location, update the edgeDriverPath variable in the code.

**2. Configure IPFS Desktop**

1. Install and open IPFS Desktop.
2. Go to the API section in settings:
   * Add your local host address to the API section (e.g., http://localhost:5001).
3. Restart IPFS Desktop to apply the changes.

**3. Set Up Ganache**

1. Install and run Ganache.
2. Create a new workspace or use the default one.
3. Use the RPC server URL (e.g., http://127.0.0.1:7545) in your project as needed.

**4. Deploy Smart Contracts with Remix**

1. Open Remix IDE.
2. Import your Solidity smart contract file.
3. Compile the contract:
   * Ensure the compiler version matches the pragma version in your Solidity file.
4. Deploy the contract:
   * Connect Remix to the Ganache test network.
   * Use the "Injected Web3" environment in Remix.
   * Deploy the contract and obtain the following:
     + **ABI** (Application Binary Interface)
     + **Contract Address**
5. Replace the ABI and contract address in the project code:
6. web3.Eth.GetContract(<ABI>, <ContractAddress>);

**Running the Project**

1. Open the project in your preferred IDE (e.g., Visual Studio).
2. Restore NuGet packages.
3. Build and run the project.
4. Ensure the following services are running:
   * **Edge WebDriver**
   * **IPFS Desktop**
   * **Ganache**