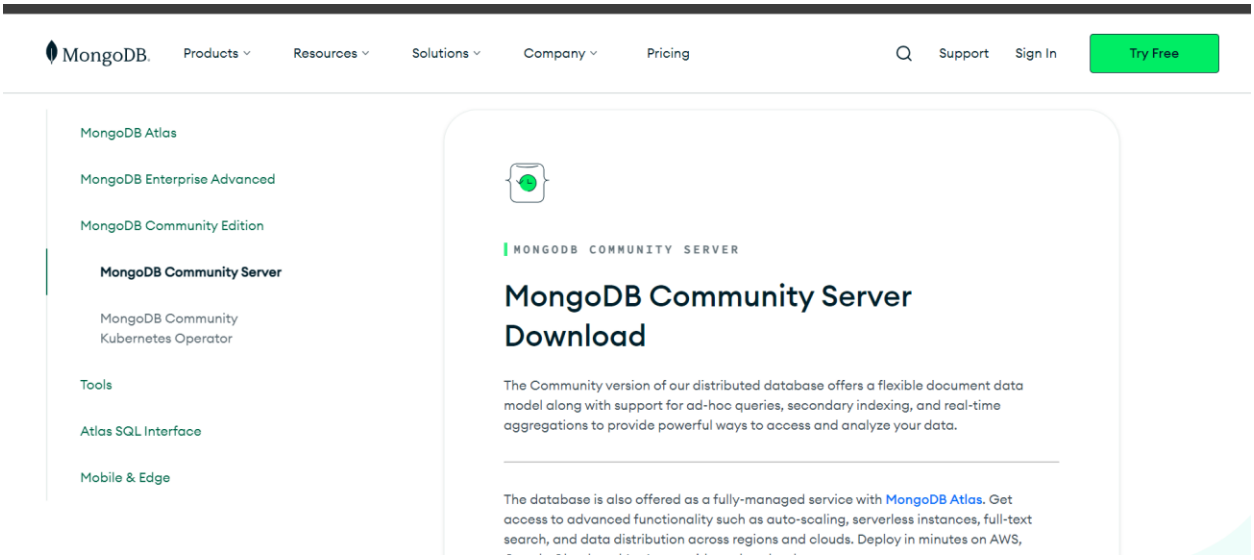
Installation Guide for MongoDB and necessary libraries

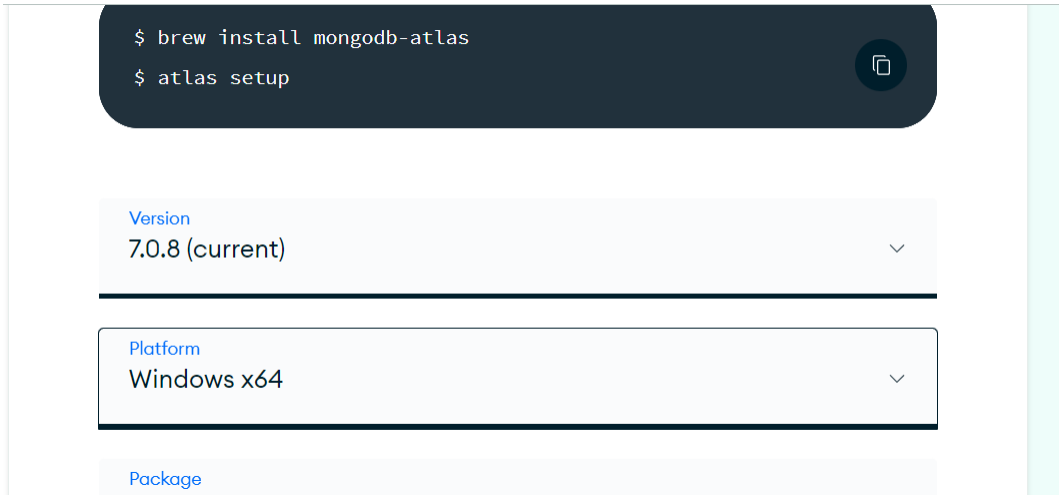
Step 1: Visit the MongoDB Download Center

Navigate to the MongoDB Download Center by opening your web browser and going to the following link: MongoDB Download Center



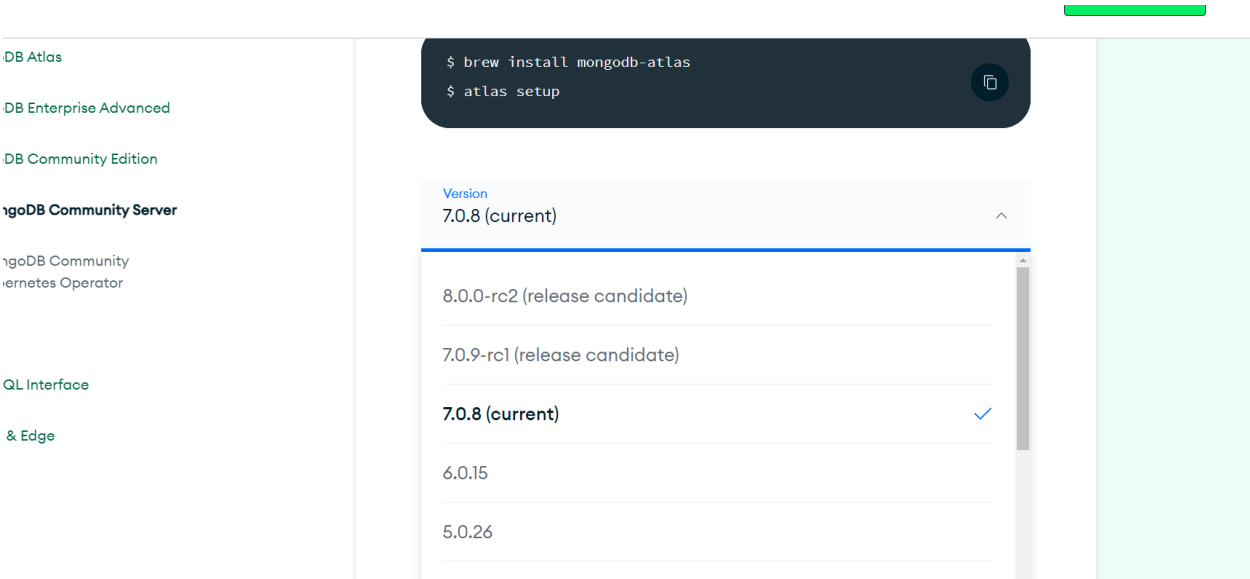
Step 2: Choose Your Platform

On the MongoDB Download Center page, you will see options for different platforms. Choose the platform that corresponds to the operating system of your computer. MongoDB supports various platforms including Windows, macOS, and Linux.



Step 3: Select the MongoDB Version

Select the MongoDB version you want to download. For the latest stable release, choose the version labeled as "Community Server".



Step 4: Select the Installation Package

Under the selected version, choose the appropriate installation package for your operating system. The options usually include MSI for Windows, PKG for macOS, and TGZ for Linux.

Step 5: Download MongoDB Community Server

Click on the download button next to the selected installation package. Your browser will begin downloading the MongoDB Community Server installer file. The download may take a few minutes depending on your internet connection speed.

Step 6: Install MongoDB Community Server

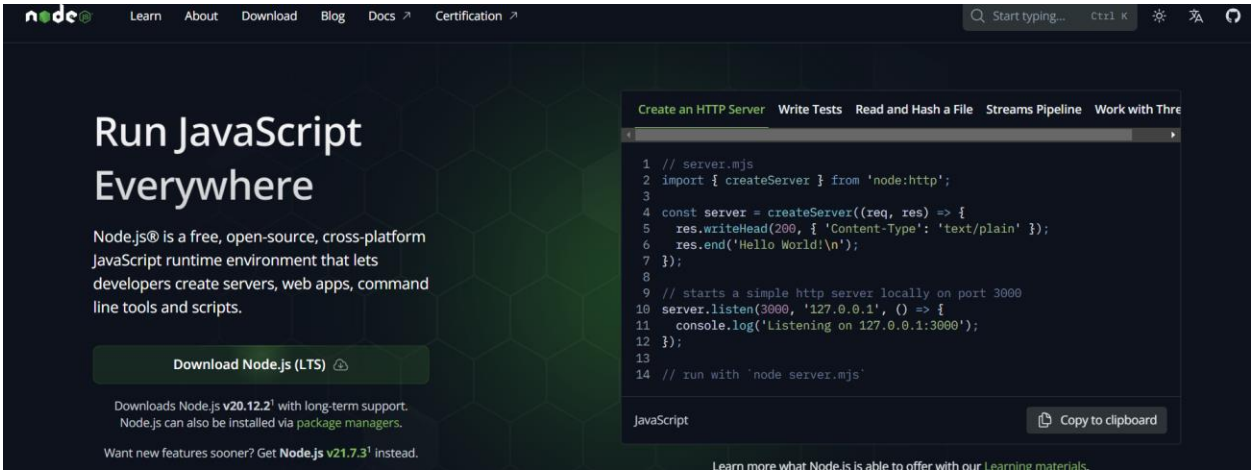
Once the download is complete, locate the downloaded installer file on your computer and double-click to run it. Follow the on-screen instructions to install MongoDB Community Server on your computer.

Step 7: Complete the Installation

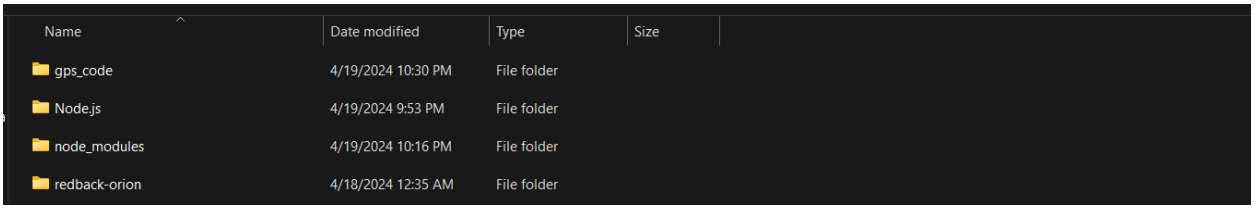
During the installation process, you may be asked to choose the installation directory and configure additional settings. Make sure to review and confirm your choices before proceeding with the installation.

Installing Node.js:

1. **Download Node.js:** Visit the official Node.js website at https://nodejs.org/ and navigate to the downloads page.

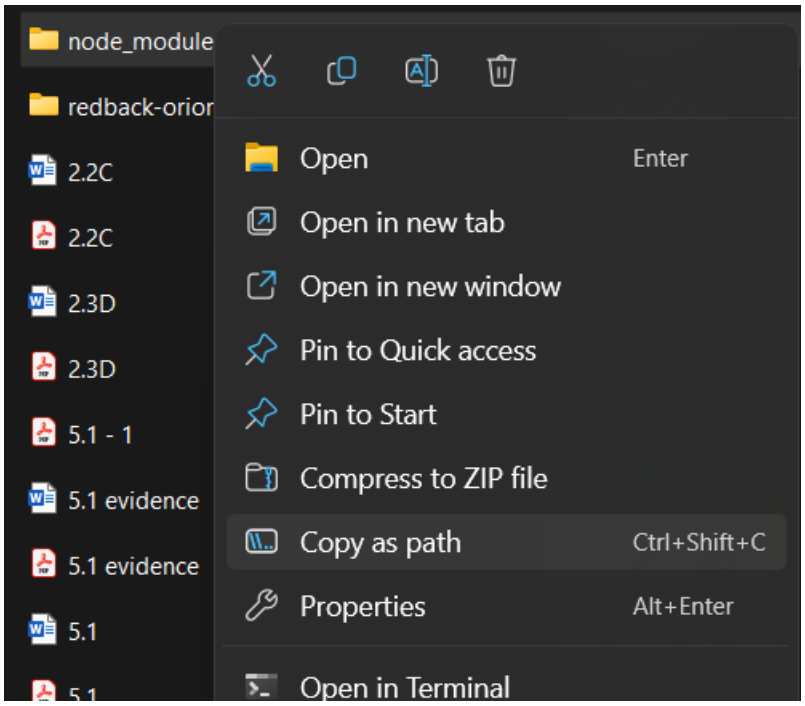


2. **Choose the Version:** Select the LTS (Long Term Support) version for stability, or the Current version for the latest features.
3. **Download and Run the Installer:** Once the installer file is downloaded, run it to start the installation process.
4. **Follow the Installation Wizard:** Follow the prompts in the installation wizard. You can generally accept the default settings, but feel free to customize them as needed.
5. **Complete the Installation:** After the installation process completes, Node.js and npm (Node Package Manager) should be installed on your system.



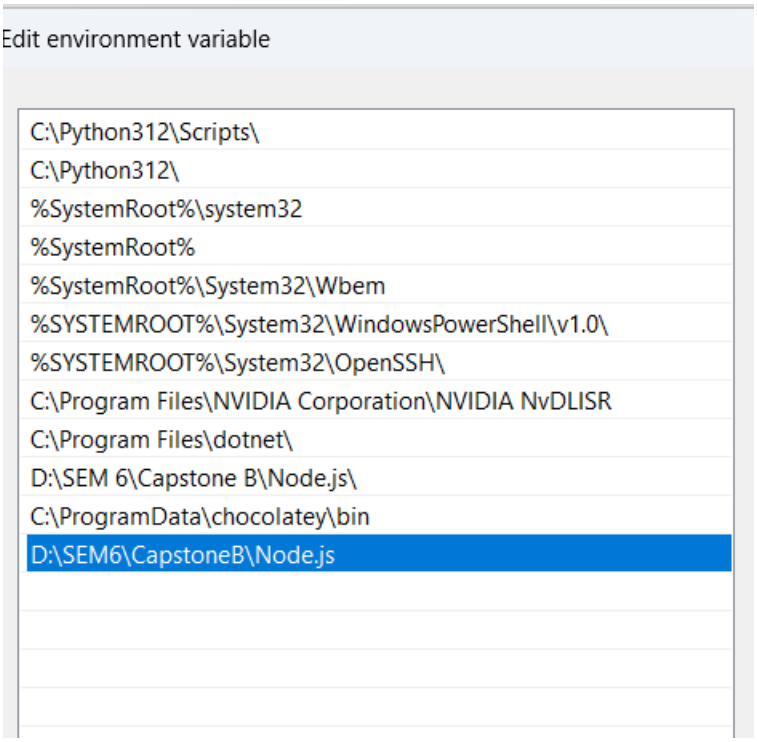
Adding Node.js to Environment Variables (Windows):

1. **Open System Properties:**
    - Right-click on the "This PC" or "My Computer" icon on your desktop or in File Explorer.
    - Select "Properties" from the context menu.
    - In the System Properties window, click on "Advanced system settings" on the left sidebar.
2. **Open Environment Variables:**
    - In the System Properties window, click on the "Environment Variables" button.
3. **Edit System Variables:**
    - In the Environment Variables window, find the "Path" variable in the "System variables" section.
    - Select it and click on the "Edit" button.
4. **Add Node.js Path:**
    - In the Edit Environment Variable window, click on the "New" button.
    - Enter the path to the directory where Node.js is installed. The default installation path for Node.js on Windows is usually "C:\Program Files\nodejs".
    - Click "OK" to save the changes and close all windows.



System variables

Variable	Value
node	"D:\SEM6\CapstoneB\Node.js"
NUMBER_OF_PROCESSORS	28
OS	Windows_NT
Path	C:\Python312\Scripts\;C:\Python312\;C:\Windows\system32;C:\...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC;.PY;.PYW



5. **Verify Installation:**
    - Open a new command prompt window (or restart any existing ones).
    - Type **node -v** and press Enter. You should see the installed version of Node.js.
    - Similarly, type **npm -v** and press Enter. You should see the installed version of npm.
    -

```
PS D:\> cd SEM6
PS D:\SEM6> cd CapstoneB
PS D:\SEM6\CapstoneB> node -v
v20.12.2
PS D:\SEM6\CapstoneB>
```

Adding Node.js to Environment Variables (macOS/Linux):

1. **Open Terminal:**
    - Launch Terminal on macOS or any terminal emulator on Linux.
2. **Edit the Bash Profile:**

- Type **nano ~/.bash_profile** and press Enter. This command opens the Bash profile file in the nano text editor. If you're using a different shell, such as Zsh, you'll need to edit the appropriate profile file (e.g., **~/.zshrc**).

3. **Add Node.js Path:**
    - Add the following line to the file:

rubyCopy code

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

This assumes that Node.js was installed using the default settings. If you installed it in a different directory, adjust the path accordingly.

4. **Save and Exit:**
    - Press **Ctrl + X** to exit nano.
    - Press **Y** to confirm saving changes.
    - Press **Enter** to confirm the filename.
5. **Apply Changes:**
    - To apply the changes immediately, type **source ~/.bash_profile** and press Enter.
6. **Verify Installation:**
    - Close and reopen the terminal.
    - Type **node -v** and press Enter. You should see the installed version of Node.js.
    - Similarly, type **npm -v** and press Enter. You should see the installed version of npm.

That's it! You've successfully installed Node.js and added it to your system's environment variables. Now you can start using Node.js to develop applications.

Steps For Installing Mongoose and serialport

- For both the installations you just have to type the following commands

  npm install -g mongoose and npm install mongoose

  npm install serialport

You can verify the installation by typing the following command

npm list <package_name> like npm list mongoose and npm list serialport

```
PS D:\SEM6\CapstoneB> npm list mongoose
CapstoneB@ D:\SEM6\CapstoneB
`-- mongoose@8.3.2

PS D:\SEM6\CapstoneB> npm list serialport
CapstoneB@ D:\SEM6\CapstoneB
`-- serialport@12.0.0
```