

Node.js Installation and Setup

1. Visit **nodejs.org** and download the LTS version.
 2. Install Node.js on your computer.
 3. After installation, open **CMD (Command Prompt)** and check the installed versions:
 4. `node -v`
 5. `npm -v`
 6. If an error message occurs, set the environment variables properly during the setup.
-

Install Visual Studio Code (VS Code)

5. Download and install **Visual Studio Code** from <https://code.visualstudio.com>.
-

Start Node.js Project

6. Create a new folder anywhere on your computer. Example: `backend-project`
 7. Open **VS Code**, and open the `backend-project` folder.
 8. Open the **Terminal** in VS Code and initialize a Node.js project:
 9. `npm init -y`
-

If Error: "Running script is disabled for security reasons"

9. Click on the link provided in the error message to learn more.
10. To check current execution policy, run:
11. `Get-ExecutionPolicy`
12. If the output is `Restricted`, then change it:
13. `Set-ExecutionPolicy RemoteSigned`
14. Confirm again:
15. `Get-ExecutionPolicy`

It should now display `RemoteSigned`.

Continue Project Setup

13. Run again:

14. `npm init -y`

This will create a `package.json` file.

15. Create a file called `index.js` in your project folder.

16. Write the following code inside `index.js`:

17. `console.log("Hello");`

18. Run the project:

19. `node index.js`

Install Express.js and Create a Server

17. Visit expressjs.com to learn more about Express.

18. Install Express.js in your project:

19. `npm install express`

20. Replace the code in `index.js` with:

```
const express = require('express');
const app = express();
```

```
app.listen(3000, () => {
  console.log("Port listening");
});
```

```
app.get('/', (req, res) => {
  try {
    res.send('Hello!');
  } catch (error) {
    console.error(error);
  }
});
```

21. Open the browser and go to:

`http://localhost:3000/`

You will see the message **"Hello!"**.

Managing Express Server

21. To stop the server, press **CTRL+C** in the terminal.
 22. To restart, run:
 23. `npm run start`
 24. Each time you change the code, you will need to stop and restart the server manually.
-

Automate Server Restart with Nodemon

24. Install **Nodemon** globally:
25. `npm install -g nodemon`

Or install it locally:

```
npm install --save-dev nodemon
```

26. Update `package.json`:

```
"scripts": {  
  "start": "node index.js",  
  "dev": "nodemon index.js"  
}
```

Run the server in development mode:

```
npm run dev
```

Now, Nodemon will automatically restart the server when you save changes!

Conclusion

Congratulations! 🎉 You have successfully:

- Installed Node.js and VS Code
- Created a basic Express server
- Automated the server restart with Nodemon

(Prepared in simple language for easy understanding.)