

Experiment 4

AIM: Use npm / yarn / pip to install and manage packages

Step 1: Check Installation

```
C:\Users\student\Desktop>npm -v
```

```
10.9.0
```

```
C:\Users\student\Desktop>node -v
```

```
v23.3.0
```

Step 2: Create New npm Project

```
C:\>cd Users
```

```
C:\Users>cd student
```

```
C:\Users\student>cd Desktop
```

```
C:\Users\student\Desktop>mkdir npm-lab
```

```
C:\Users\student\Desktop>cd npm-lab
```

```
C:\Users\student\Desktop\npm-lab>npm init -y
```

```
(node:11488) ExperimentalWarning: CommonJS module C:\Program  
Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module  
C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using  
require().
```

Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)

Wrote to C:\Users\student\Desktop\npm-lab\package.json:

```
{  
  "name": "npm-lab",  
  "version": "1.0.0",  
  "main": "index.js",  
  "scripts": {  
    "test": "echo \"Error: no test specified\" && exit 1"  
  },  
  "keywords": [],  
  "author": "",  
  "license": "ISC",  
  "description": ""  
}
```

Step 3: Install Required Packages

```
C:\Users\student\Desktop\npm-lab>npm install express
```

```
(node:8820) ExperimentalWarning: CommonJS module C:\Program  
Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module  
C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using  
require().
```

```
Support for loading ES Module in require() is an experimental feature and might change at any time  
(Use `node --trace-warnings ...` to show where the warning was created)
```

added 65 packages, and audited 66 packages in 4s

22 packages are looking for funding

run `npm fund` for details

found 0 vulnerabilities

```
C:\Users\student\Desktop\npm-lab>npm install axios
```

(node:9940) ExperimentalWarning: CommonJS module C:\Program Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using require().

Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)

added 11 packages, and audited 77 packages in 2s

24 packages are looking for funding

run `npm fund` for details

found 0 vulnerabilities

```
C:\Users\student\Desktop\npm-lab>npm install nodemon --save.dev
```

(node:9224) ExperimentalWarning: CommonJS module C:\Program Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using require().

Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)

added 27 packages, and audited 104 packages in 3s

28 packages are looking for funding

run `npm fund` for details

found 0 vulnerabilities

C:\Users\student\Desktop\npm-lab>npm list

(node:13052) ExperimentalWarning: CommonJS module C:\Program Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using require().

Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)

npm-lab@1.0.0 C:\Users\student\Desktop\npm-lab

+-- axios@1.13.5

+-- express@5.2.1

`-- nodemon@3.1.11

C:\Users\student\Desktop\npm-lab>notepad index.js

Step 4: Create Web Server

Create a file named index.js and Add below content :

```
const express = require("express");
```

```
const axios = require("axios");
```

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

```
app.get("/", (req, res) => {
```

```
  res.send("Hello Open Source Lab");
```

```
});
```

```
// JSON Route
```

```
app.get("/api/info", (req, res) => {
```

```
  res.json({
```

```

name: "NPM Lab",

subject: "Open Source Technology",

semester: "BE 6th Sem"

});

});

// Axios Demo Route

app.get("/api/user", async (req, res) => {

const response = await axios.get("https://jsonplaceholder.typicode.com/users/1");

res.json(response.data);

});

app.listen(3000, () => {

console.log("Server running at http://localhost:3000");

});

```

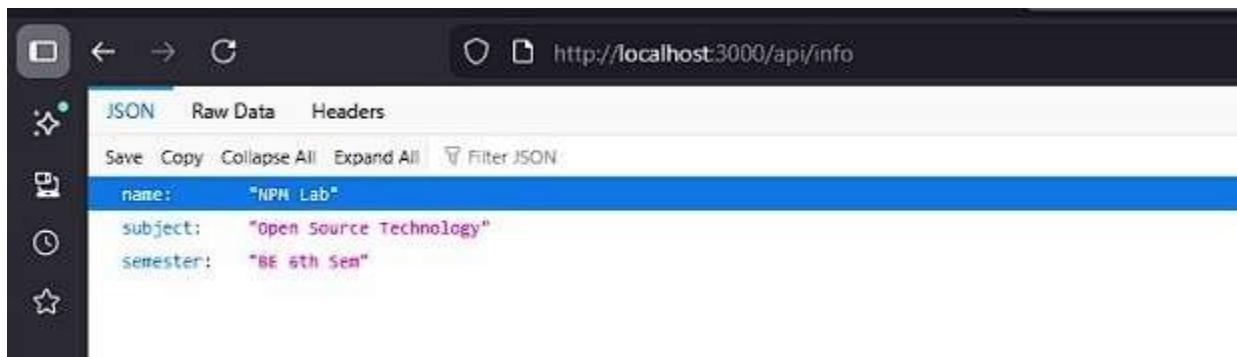
Step 5: Run Server (Normal Way)

```
C:\Users\student\Desktop\npm-lab>node index.js

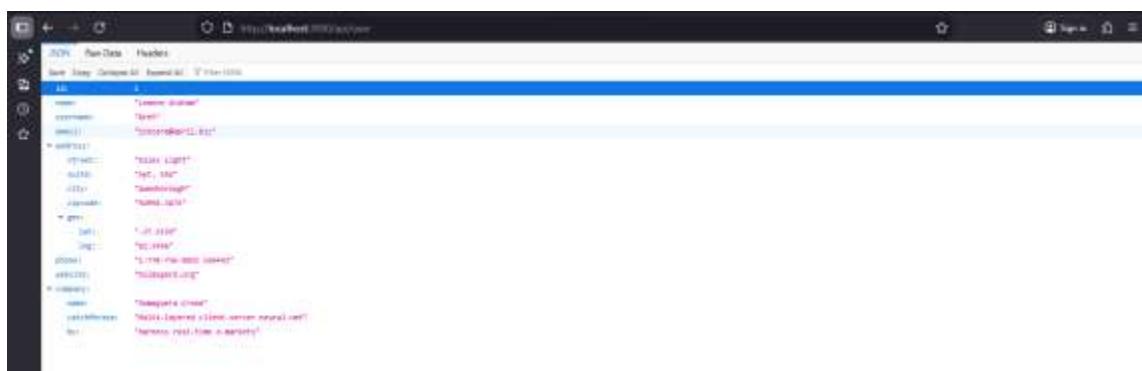
Server running at http://localhost:3000
```



<http://localhost:3000/api/info>



<http://localhost:3000/api/user>



Step 6: Add npm Scripts

Open package.json and modify scripts section:

```

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

Step 7: Run Using npm Script

1. Normal mode:

C:\Users\student\Desktop\npm-lab>npm run start

```
> npm-lab@1.0.0 start
```

```
> node index.js
```

Server running at http://localhost:3000

Terminate batch job (Y/N)? y

2. Development mode (nodemon):

Now modify index.js text and save → Server automatically restarts (nodemon demo).

```
C:\Users\student\Desktop\npm-lab>npm run dev
```

```
> npm-lab@1.0.0 dev
```

```
> nodemon index.js
```

```
[nodemon] 3.1.11
```

```
[nodemon] to restart at any time, enter `rs`
```

```
[nodemon] watching path(s): *.*
```

```
[nodemon] watching extensions: js,mjs,cjs,json
```

```
[nodemon] starting `node index.js`
```

Server running at http://localhost:3000

```
[nodemon] restarting due to changes...
```

```
[nodemon] starting `node index.js`
```

Server running at http://localhost:3000

```
Terminate batch job (Y/N)? y
```

Step 8: Delete node_modules and Reinstall

Delete manually

Now reinstall:

```
C:\Users\student\Desktop\npm-lab>npm install
```

```
(node:12492) ExperimentalWarning: CommonJS module C:\Program  
Files\nodejs\node_modules\npm\node_modules\debug\src\node.js is loading ES Module  
C:\Program Files\nodejs\node_modules\npm\node_modules\supports-color\index.js using  
require().
```

Support for loading ES Module in require() is an experimental feature and might change at any time
(Use `node --trace-warnings ...` to show where the warning was created)

added 103 packages, and audited 104 packages in 1s

28 packages are looking for funding

run `npm fund` for details

found 0 vulnerabilities

Step 9: Add .gitignore File

Create file: .gitignore

Add:

node_modules/

Step 10: Upload Project to Git (Without node_modules)

```
C:\Users\student\Desktop\npm-lab>git config user.name "dharmiktrada"
```

```
C:\Users\student\Desktop\npm-lab>git config user.email  
"dharmik.trada132980@marwadiuniversity.ac.in"
```

```
C:\Users\student\Desktop\npm-lab>git init
```

Initialized empty Git repository in C:/Users/student/Desktop/npm-lab/.git/

```
C:\Users\student\Desktop\npm-lab>git add .
```

warning: in the working copy of 'package-lock.json', LF will be replaced by CRLF the next time Git
touches it

warning: in the working copy of 'package.json', LF will be replaced by CRLF the next time Git
touches it

```
C:\Users\student\Desktop\npm-lab>git remote add origin "https://github.com/dharmiktrada"
```

```
C:\Users\student\Desktop\npm-lab>git branch -m main
```

```
C:\Users\student\Desktop\npm-lab>git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to "https://github.com/dharmiktrada"
```

```
C:\Users\student\Desktop\npm-lab>dir
Volume in drive C has no label.
Volume Serial Number is C2A1-ABB5
```

Directory of C:\Users\student\Desktop\npm-lab

```
18-02-2026 08:47 <DIR> .
18-02-2026 08:47 <DIR> ..
18-02-2026 08:41      13 .gitignore
18-02-2026 08:35      610 index.js
18-02-2026 08:38 <DIR>     node_modules
18-02-2026 08:38      45,150 package-lock.json
18-02-2026 08:12      310 package.json
4 File(s)    46,083 bytes
3 Dir(s) 71,987,359,744 bytes free
```

```
C:\Users\student\Desktop\npm-lab>git add .
```

```
C:\Users\student\Desktop\npm-lab>git branch -M main
```

```
C:\Users\student\Desktop\npm-lab>git pull origin main --allow-unrelated-histories
remote: Enumerating objects: 16, done.
remote: Counting objects: 100% (16/16), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 16 (delta 4), reused 3 (delta 1), pack-reused 0 (from 0)
Unpacking objects: 100% (16/16), 253.34 KiB | 560.00 KiB/s, done.
From https://github.com/dharmiktrada
 * branch      main    -> FETCH_HEAD
 * [new branch] main    -> origin/main
```

```
C:\Users\student\Desktop\npm-lab>git push -u origin main
```

branch 'main' set up to track 'origin/main'.

Everything up-to-date

```
C:\Users\student\Desktop\npm-lab>git status
```

On branch main

Your branch is up to date with 'origin/main'.

Changes to be committed:

```
(use "git restore --staged <file>..." to unstage)
```

new file: .gitignore

new file: index.js

new file: package-lock.json

new file: package.json

```
C:\Users\student\Desktop\npm-lab>git commit -m "Initial commit"
```

[main dc97862] Initial commit

Committer: Students <student@mefgi.com>

Your name and email address were configured automatically based on your username and hostname. Please check that they are accurate.

You can suppress this message by setting them explicitly. Run the following command and follow the instructions in your editor to edit your configuration file:

```
git config --global --edit
```

After doing this, you may fix the identity used for this commit with:

```
git commit --amend --reset-author
```

4 files changed, 1325 insertions(+)

create mode 100644 .gitignore

create mode 100644 index.js

create mode 100644 package-lock.json

create mode 100644 package.json

```
C:\Users\student\Desktop\npm-lab>git push origin main
```

Enumerating objects: 7, done.

Counting objects: 100% (7/7), done.

Delta compression using up to 6 threads

Compressing objects: 100% (5/5), done.

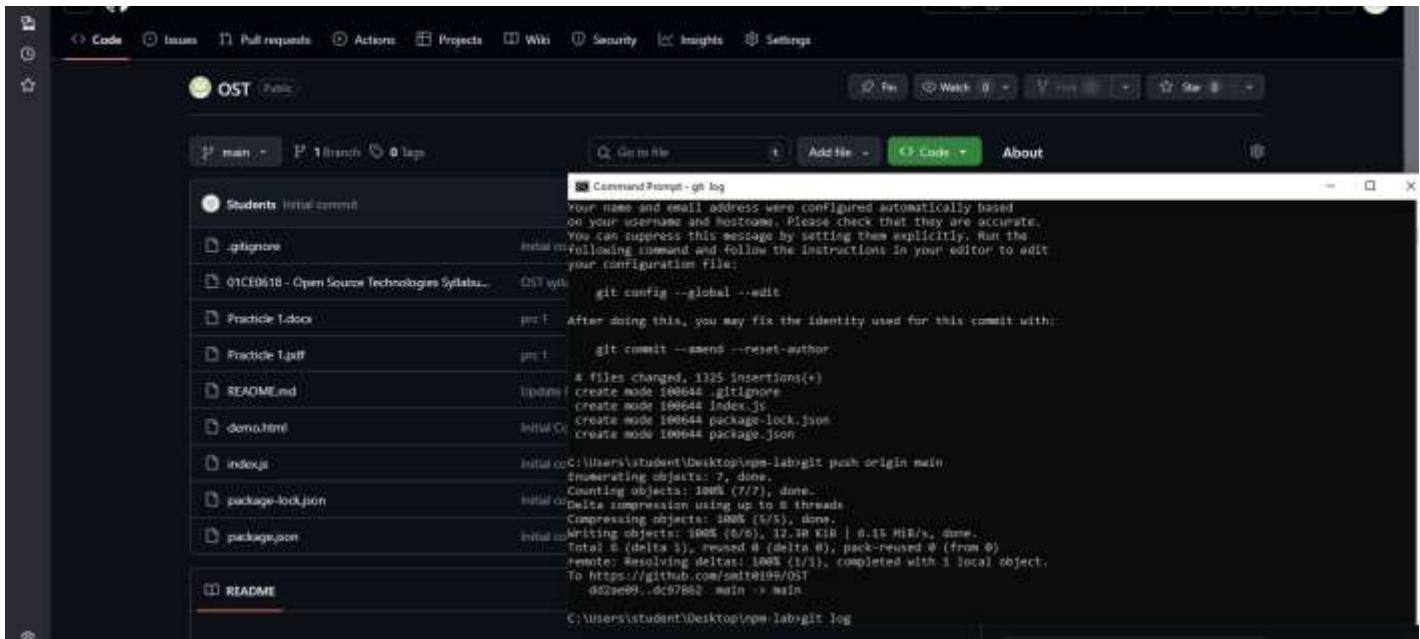
Writing objects: 100% (6/6), 12.30 KiB | 6.15 MiB/s, done.

Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

To "https://github.com/dharmiktrada"

dd2ae09..dc97862 main -> main



The screenshot shows a GitHub repository named 'OST' (Public). The repository has one branch, 'main', and no tags. The commit history shows an initial commit from 'Students' with the message 'Initial commit'. The commit includes files: .gitignore, 01CE0618 - Open Source Technologies Syllabus., Practice1.docx, Practice1.pdf, README.md, demo.html, index.js, package-lock.json, and package.json. A command-line interface window is open at the bottom right, showing the output of a 'git log' command. The log message indicates that the user's name and email address were configured automatically based on their GitHub profile. It provides instructions to suppress this message by setting them explicitly in the configuration file. It also shows the command 'git config --global --edit' and the resulting message: 'After doing this, you may fix the identity used for this commit with: git commit --amend --reset-author'. The log then shows the execution of 'git push origin main', which resulted in 4 files being changed (1325 insertions(+)). The process involved creating mode 100644 for .gitignore, index.js, package-lock.json, and package.json. The push was successful, with a total of 6 objects (delta 5), reduced 0 (delta 0), and pack-reduced 0 (from 0). The remote resolved deltas 100% (1/1), completed with 3 local objects. The URL for the repository is https://github.com/smriti9199/OST.

```

C:\Users\student\Desktop\npm-lab>git log
commit dd2ae09..dc97862 main -> main
Author: smriti9199 (GitHub)
Date:   Mon Sep 18 11:45:00 2023 +0530

Your name and email address were configured automatically based
on your GitHub profile. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
git config --global --edit

After doing this, you may fix the identity used for this commit with:
git commit --amend --reset-author

4 files changed, 1325 insertions(+)
create mode 100644 .gitignore
create mode 100644 index.js
create mode 100644 package-lock.json
create mode 100644 package.json

initial commit
Author: smriti9199 (GitHub)
Date:   Mon Sep 18 11:45:00 2023 +0530

Initial commit

C:\Users\student\Desktop\npm-lab>git push origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 12.39 KiB | 0.15 MiB/s, done.
Total 6 (delta 5), reduced 0 (delta 0), pack-reduced 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 3 local objects.
To https://github.com/smriti9199/OST
   dd2ae09..dc97862 main -> main

```