

Practical No. 5

Github URL: [g-mahendra/awamad: Advanced web and mobile app development Laboratory assignments \(github.com\)](https://github.com/g-mahendra/awamad-Advanced-web-and-mobile-app-development-Laboratory-assignments)

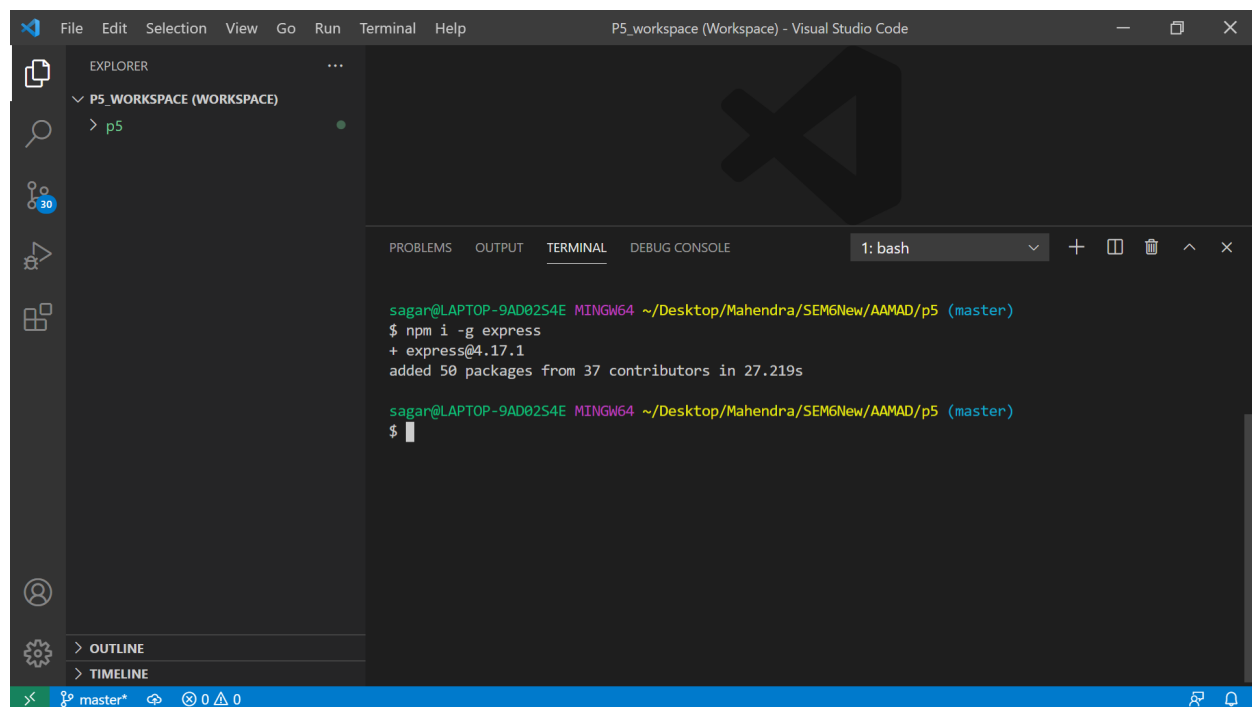
Exam Seat No:

1. 2018BTECS00033 - Mahendra Bhimrao gharge

Problem Statement 1:

1. Install Express.js globally using node's NPM
2. Verify and update package.json file for correct dependencies and other project information

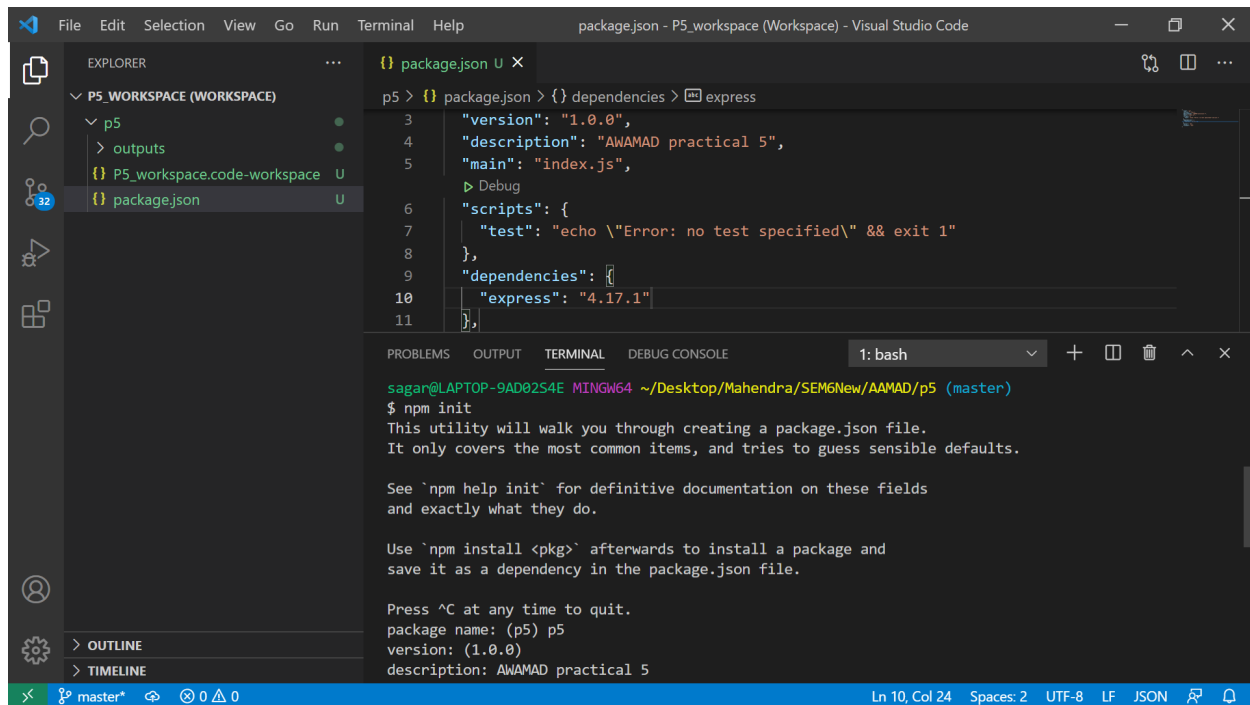
Screenshot 1:

A screenshot of the Visual Studio Code interface. The Explorer panel on the left shows a workspace named 'P5_workspace (Workspace)' with a file named 'p5'. The Terminal panel at the bottom shows a bash shell session. The user 'sagar' is at a 'LAPTOP-9AD0254E' in a 'MINGW64' environment, located at '~/Desktop/Mahendra/SEM6New/AAMAD/p5 (master)'. They have entered the command '\$ npm i -g express', which has been executed successfully, showing '+ express@4.17.1' and 'added 50 packages from 37 contributors in 27.219s'. The prompt '\$' is visible on the next line.

```
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5 (master)
$ npm i -g express
+ express@4.17.1
added 50 packages from 37 contributors in 27.219s
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5 (master)
$
```

Information 1: Installed express globally using command: **npm i -g express**

Screenshot 2:



The screenshot shows the Visual Studio Code interface. The Explorer panel on the left shows the file structure of the workspace, including a folder named 'p5' and a file named 'package.json'. The main editor area displays the 'package.json' file with the following content:

```
{
  "version": "1.0.0",
  "description": "AWAMAD practical 5",
  "main": "index.js",
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "dependencies": {
    "express": "4.17.1"
  }
}
```

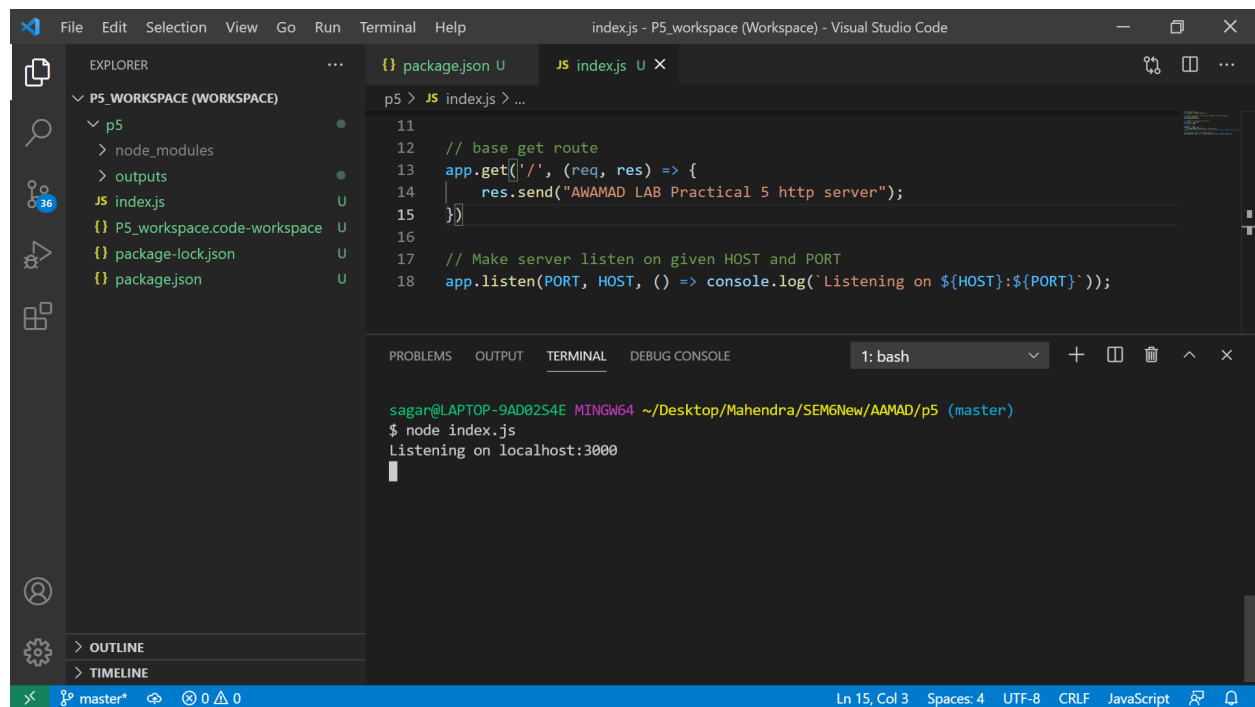
The terminal panel at the bottom shows the output of the 'npm init' command, which prompts the user to enter package name, version, and description. The user has entered 'p5' for the package name, '1.0.0' for the version, and 'AWAMAD practical 5' for the description.

Information 2: Updated **package.json** according to the version of express installed.

Problem Statement 2:

3. Write an Express app for creating a HTTP server
4. Configure IP address and port number.

Screenshot 3:



The screenshot shows the Visual Studio Code editor interface. The Explorer panel on the left displays the file structure of a workspace named 'P5_workspace'. The file 'index.js' is selected. The main editor area shows the content of 'index.js', which is a simple HTTP server using Express.js. The code includes a base get route that responds with 'AWAMAD LAB Practical 5 http server'. The server is configured to listen on a specified port and host. The terminal window at the bottom shows the command 'node index.js' being executed, resulting in the output 'Listening on localhost:3000'.

```
11
12 // base get route
13 app.get('/', (req, res) => {
14   res.send("AWAMAD LAB Practical 5 http server");
15 })
16
17 // Make server listen on given HOST and PORT
18 app.listen(PORT, HOST, () => console.log(`Listening on ${HOST}:${PORT}`));
```

```
sagar@LAPTOP-9AD02S4E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5 (master)
$ node index.js
Listening on localhost:3000
```

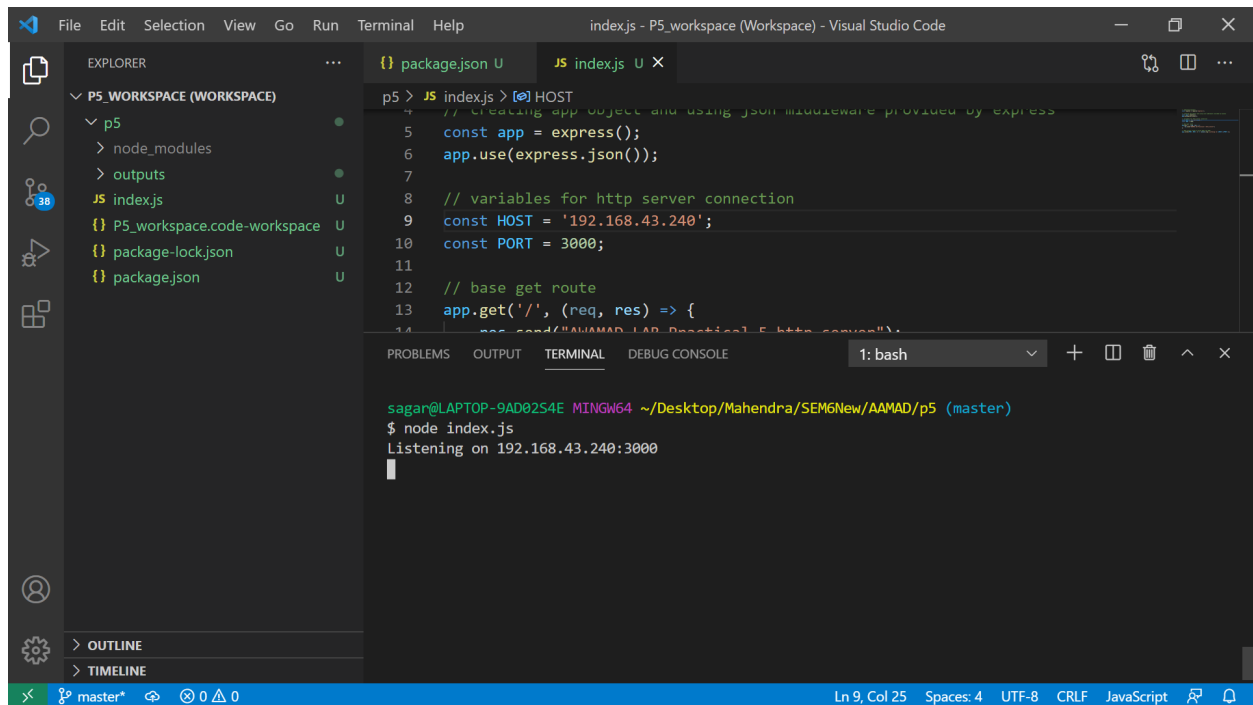
Information 3: Ran http server on **localhost** with port as **3000**

Screenshot 4:



Information 4: Output in the browser

Screenshot 5:



The screenshot shows the Visual Studio Code interface. The Explorer panel on the left displays the file structure of the 'P5_workspace' workspace, including 'p5', 'node_modules', 'outputs', 'index.js', 'P5_workspace.code-workspace', 'package-lock.json', and 'package.json'. The main editor area shows the 'index.js' file with the following code:

```
p5 > JS index.js > HOST
// Creating app object and using json middleware provided by express
5 const app = express();
6 app.use(express.json());
7
8 // variables for http server connection
9 const HOST = '192.168.43.240';
10 const PORT = 3000;
11
12 // base get route
13 app.get('/', (req, res) => {
14   res.send("AWAMAD LAB Practical 5 http server");
15 })
```

The TERMINAL panel at the bottom shows the command prompt output:

```
sagar@LAPTOP-9AD02S4E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5 (master)
$ node index.js
Listening on 192.168.43.240:3000
```

Information 5: Ran http server on **192.168.43.240** with port as **3000**

Screenshot 6:



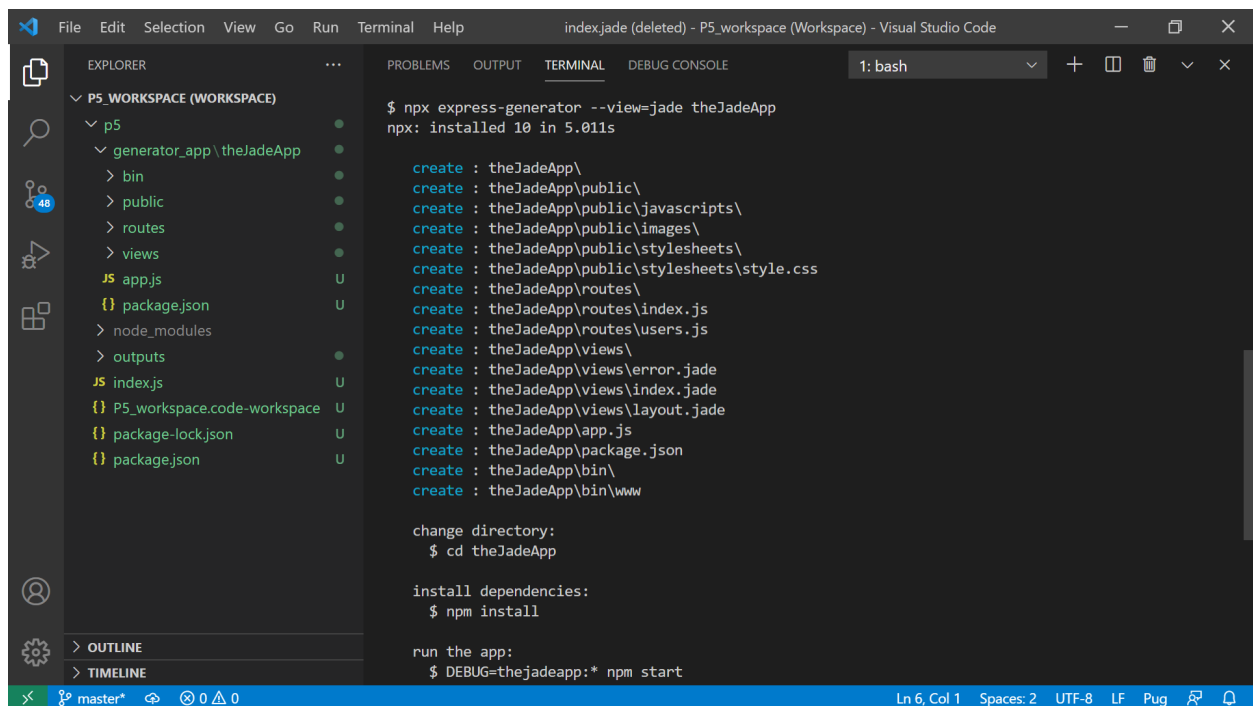
Information 6: Output in the browser

Problem Statement 3:

1. Install Express Generator in working directory.
2. Create an Express App using express generator with default view (Jade).
3. Create an Express App using express generator with pug view.
4. Run HTTP server on localhost

1> The Jade App:

Screenshot 7:



The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the command `$ npx express-generator --view=jade theJadeApp` and its output, which lists the files and directories created for the new app. The Explorer panel on the left shows the file structure of the workspace, including the newly created `theJadeApp` directory. The status bar at the bottom indicates the current file is `index.jade` and the editor is using the `Pug` language mode.

```
$ npx express-generator --view=jade theJadeApp
npx: installed 10 in 5.011s

create : theJadeApp\
create : theJadeApp\public\
create : theJadeApp\public\javascripts\
create : theJadeApp\public\images\
create : theJadeApp\public\stylesheets\
create : theJadeApp\public\stylesheets\style.css
create : theJadeApp\routes\
create : theJadeApp\routes\index.js
create : theJadeApp\routes\users.js
create : theJadeApp\views\
create : theJadeApp\views\error.jade
create : theJadeApp\views\index.jade
create : theJadeApp\views\layout.jade
create : theJadeApp\app.js
create : theJadeApp\package.json
create : theJadeApp\bin\
create : theJadeApp\bin\www

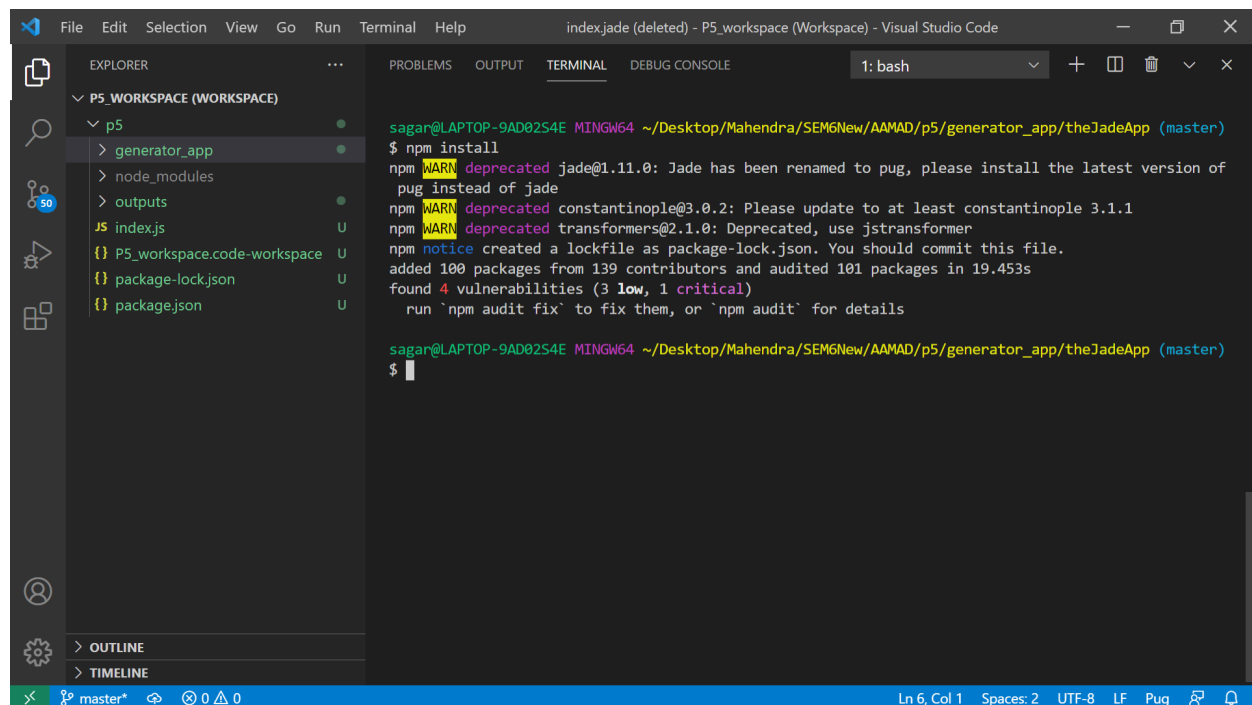
change directory:
$ cd theJadeApp

install dependencies:
$ npm install

run the app:
$ DEBUG=thejadeapp:* npm start
```

Information 7: Created a Jade app using express generator with command:
`npx express-generator --view=jade theJadeApp`

Screenshot 8:

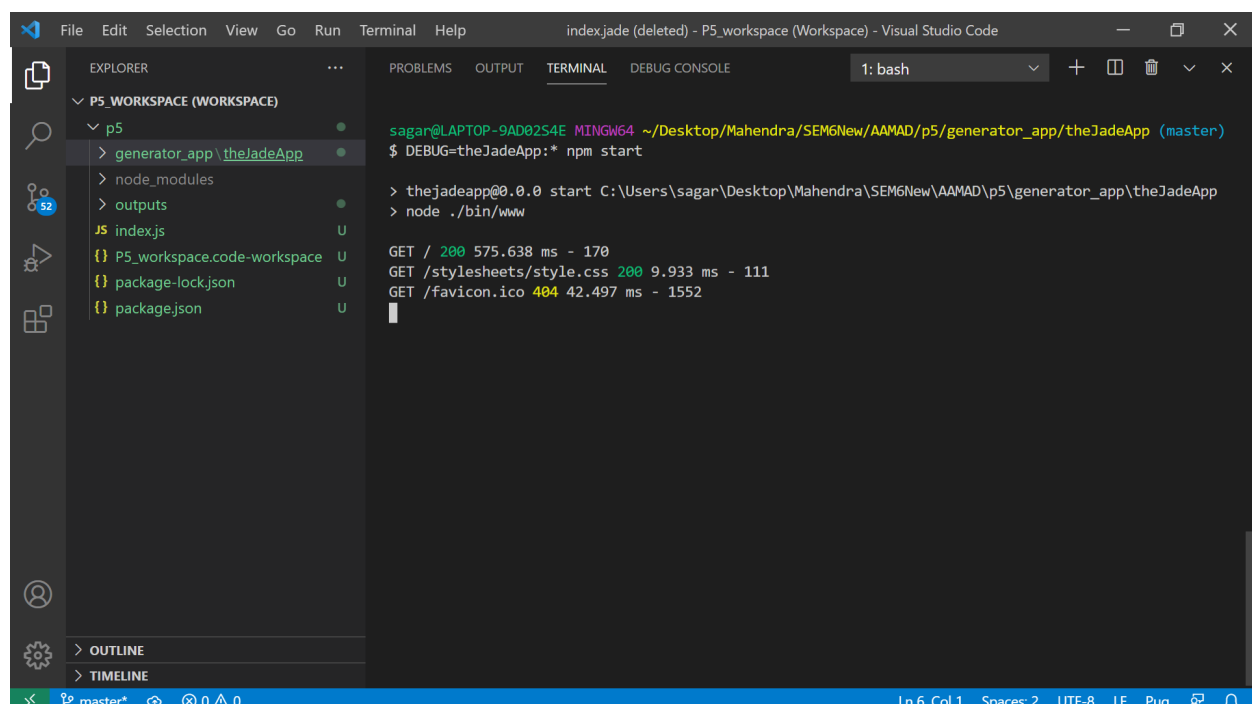


```
index.jade (deleted) - P5_workspace (Workspace) - Visual Studio Code
1: bash
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/theJadeApp (master)
$ npm install
npm WARN deprecated jade@1.11.0: Jade has been renamed to pug, please install the latest version of
pug instead of jade
npm WARN deprecated constantinople@3.0.2: Please update to at least constantinople 3.1.1
npm WARN deprecated transformers@2.1.0: Deprecated, use jstransformer
npm notice created a lockfile as package-lock.json. You should commit this file.
added 100 packages from 139 contributors and audited 101 packages in 19.453s
found 4 vulnerabilities (3 low, 1 critical)
run `npm audit fix` to fix them, or `npm audit` for details

sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/theJadeApp (master)
$
```

Information 8: Installed node modules with command: **npm -i**

Screenshot 9:



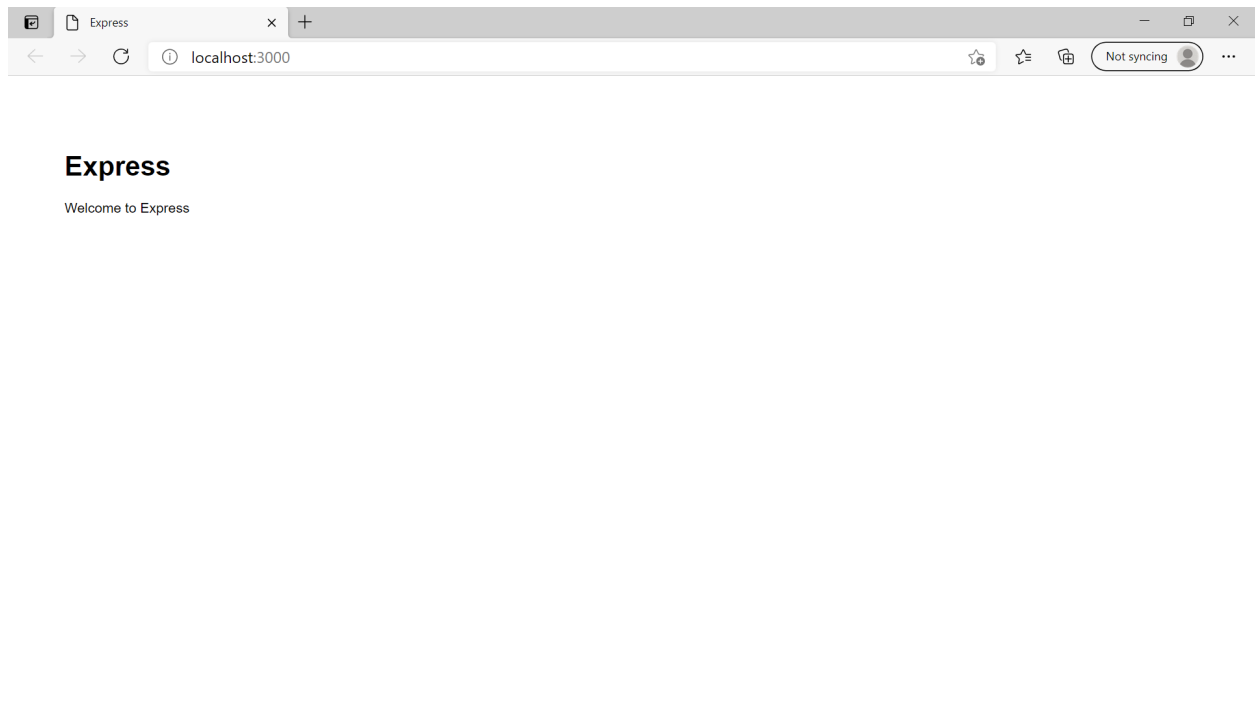
```
index.jade (deleted) - P5_workspace (Workspace) - Visual Studio Code
1: bash
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/theJadeApp (master)
$ DEBUG=theJadeApp: *npm start

> thejadeapp@0.0.0 start C:\Users\sagar\Desktop\Mahendra\SEM6New\AAMAD\p5\generator_app\theJadeApp
> node ./bin/www

GET / 200 575.638 ms - 170
GET /stylesheets/style.css 200 9.933 ms - 111
GET /favicon.ico 404 42.497 ms - 1552
```

Information 9: Running theJadeApp using the command
DEBUG=theJadeApp: *npm start

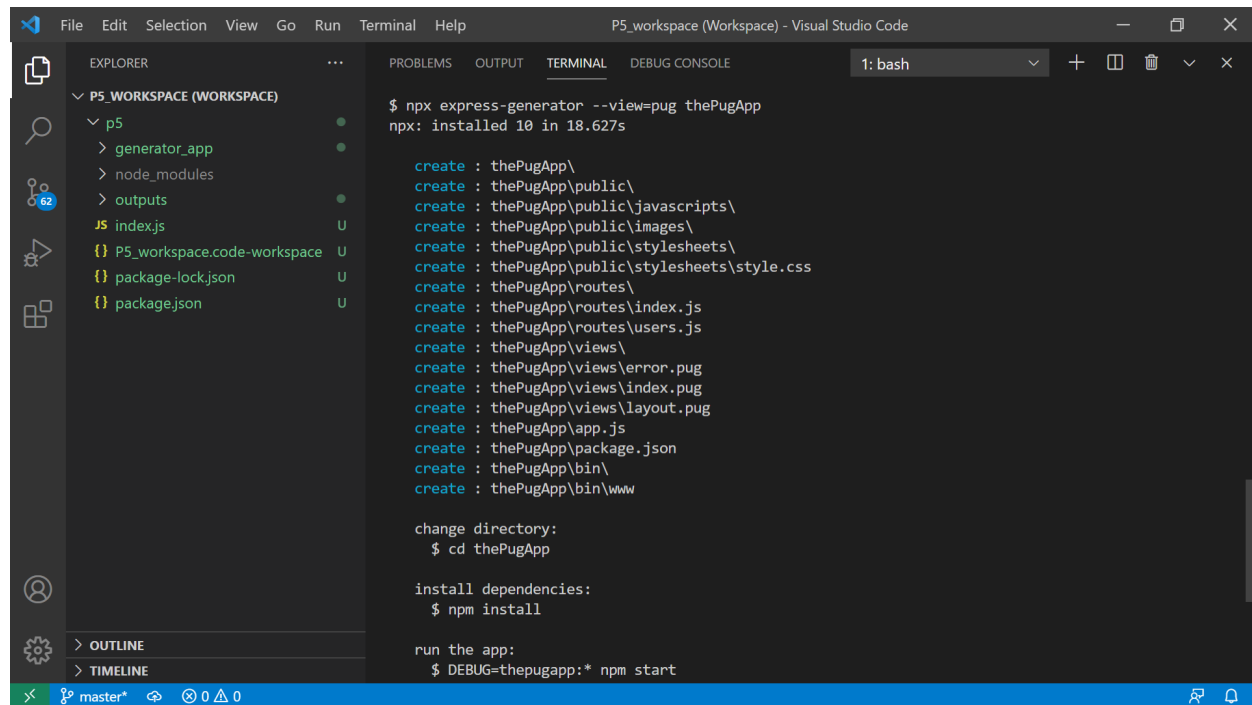
Screenshot 10:



Information 10: Output of **theJadeApp** in browser

The Pug App

Screenshot 11:



The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the command `$ npx express-generator --view=pug thePugApp` and its output, which lists the files and directories created for the new application. The Explorer panel on the left shows the project structure, including the `thePugApp` directory.

```
$ npx express-generator --view=pug thePugApp
npx: installed 10 in 18.627s

create : thePugApp\
create : thePugApp\public\
create : thePugApp\public\javascripts\
create : thePugApp\public\images\
create : thePugApp\public\stylesheets\
create : thePugApp\public\stylesheets\style.css
create : thePugApp\routes\
create : thePugApp\routes\index.js
create : thePugApp\routes\users.js
create : thePugApp\views\
create : thePugApp\views\error.pug
create : thePugApp\views\index.pug
create : thePugApp\views\layout.pug
create : thePugApp\app.js
create : thePugApp\package.json
create : thePugApp\bin\
create : thePugApp\bin\www

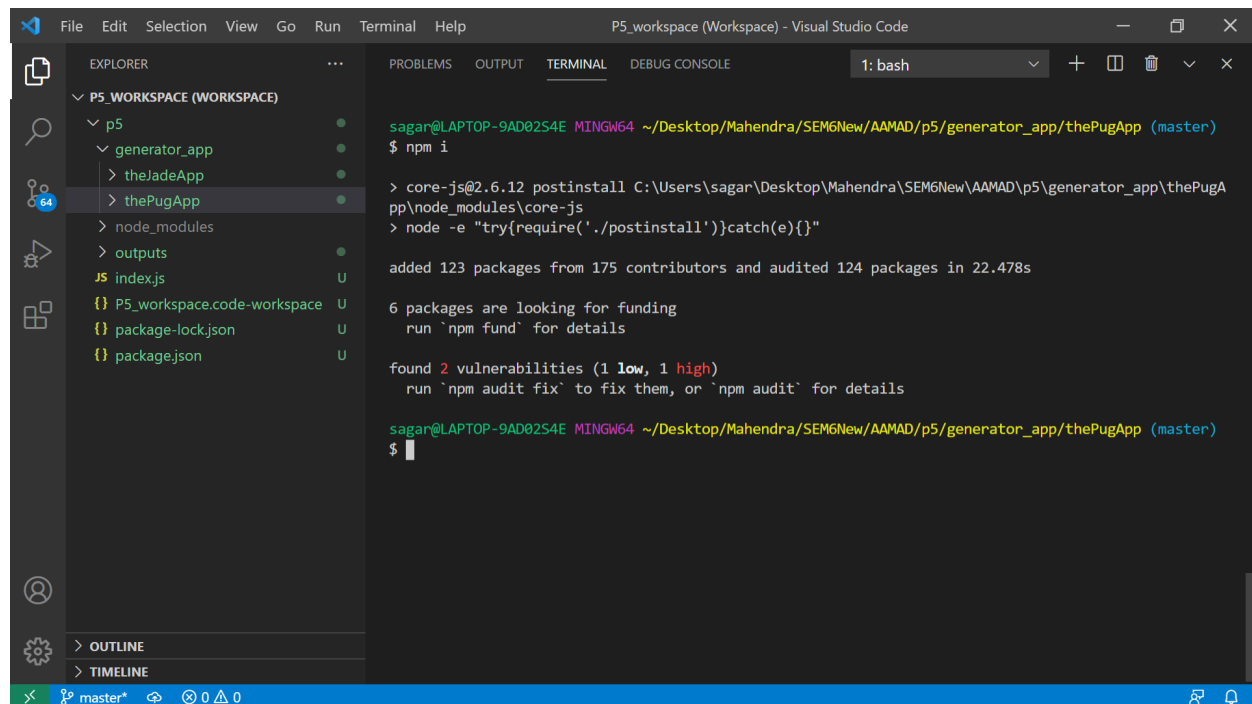
change directory:
$ cd thePugApp

install dependencies:
$ npm install

run the app:
$ DEBUG=thePugApp:* npm start
```

Information 11: Created a pug using express generator with command:
npx express-generator --view=pug thePugApp

Screenshot 12:



The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the command `$ npm i` and its output, which shows the installation of dependencies. The Explorer panel on the left shows the project structure, including the `thePugApp` directory.

```
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/thePugApp (master)
$ npm i

> core-js@2.6.12 postinstall C:\Users\sagar\Desktop\Mahendra\SEM6New\AAMAD\p5\generator_app\thePugApp
pp\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"

added 123 packages from 175 contributors and audited 124 packages in 22.478s

6 packages are looking for funding
run `npm fund` for details

found 2 vulnerabilities (1 low, 1 high)
run `npm audit fix` to fix them, or `npm audit` for details

sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/thePugApp (master)
$
```

Information 12: Installed node modules with command: **npm i**

Screenshot 13:

```
File Edit Selection View Go Run Terminal Help index.js - P5_workspace (Workspace) - Visual Studio Code

EXPLORER
P5_WORKSPACE (WORKSPACE)
  p5
    generator_app
    theJadeApp
    thePugApp
    bin
    node_modules
    public
    routes
    JS index.js
    JS users.js
    JS app.js
    package-lock.json
    package.json
    node_modules
    outputs
    generator
    jade
    jade_app.png
    npm_i_in_theJadeApp.png

OUTLINE
TIMELINE

1: bash
sagar@LAPTOP-9AD0254E MINGW64 ~/Desktop/Mahendra/SEM6New/AAMAD/p5/generator_app/thePugApp (master)
$ DEBUG=thePugApp:* npm start

> thepugapp@0.0.0 start C:\Users\sagar\Desktop\Mahendra\SEM6New\AAMAD\p5\generator_app\thePugApp
> node ./bin/www

GET / 200 488.147 ms - 215
GET /stylesheets/style.css 304 4.733 ms - -
```

Information 13: PugApp running on localhost

Screenshot 14:



Information 14: Output of thepugapp in the browser