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Third Year B. Tech., Sem V 2021-22

Programming Lab 3

Practical No- 7

PRN/ Roll No: 2019BTECS00064

Full name: Kunal Santosh Kadam

Batch: T2

**Title of Practical: To create a Node.js HTTP server and REPL
Commands.**

Problem Statement 1:

1. Create a separate workspace for your project using selected IDE.

Ans:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19044.1348]
(c) Microsoft Corporation. All rights reserved.

G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace>npm install -g express-generator
npm WARN deprecated mkdirp@0.5.1: Legacy versions of mkdirp are no longer supported. Please update to mk
dirp 1.x. (Note that the API surface has changed to use Promises in 1.x.)
C:\Users\Pragati Kadam\AppData\Roaming\npm\express -> C:\Users\Pragati Kadam\AppData\Roaming\npm\node_mo
dules\express-generator\bin\express-cli.js
+ express-generator@4.16.1
added 10 packages from 13 contributors in 7.263s

G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace>express --view=ejs myapp

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

  change directory:
    > cd myapp

  install dependencies:
    > npm install

  run the app:
    > SET DEBUG=myapp:* & npm start

G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace>
```

2. Write a program to start a Node.js server on localhost and listens to the client requests on port number 8080.

Ans:

G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace\myapp\routes\index.js (myapp) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

- myapp
 - bin
 - public
 - routes
 - /* index.js
 - /* users.js
 - views
 - /* app.js
 - /* package.json

```
1 var express = require('express');
2 var router = express.Router();
3
4 /* GET home page. */
5 router.get('/', function(req, res, next) {
6   res.render('index', { title: 'Express' });
7 });
8
9 module.exports = router;
10
```

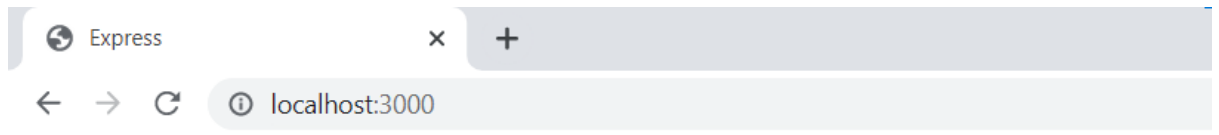
G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace\myapp\views\index.ejs (myapp) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

- myapp
 - bin
 - public
 - routes
 - /* index.js
 - /* users.js
 - views
 - error.ejs
 - index.ejs
 - /* app.js
 - /* package.json

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title><%= title %></title>
5     <link rel='stylesheet' href='/stylesheets/style.css' />
6   </head>
7   <body>
8     <h1><%= title %></h1>
9     <p>Welcome to <%= title %></p>
10  </body>
11 </html>
12
```

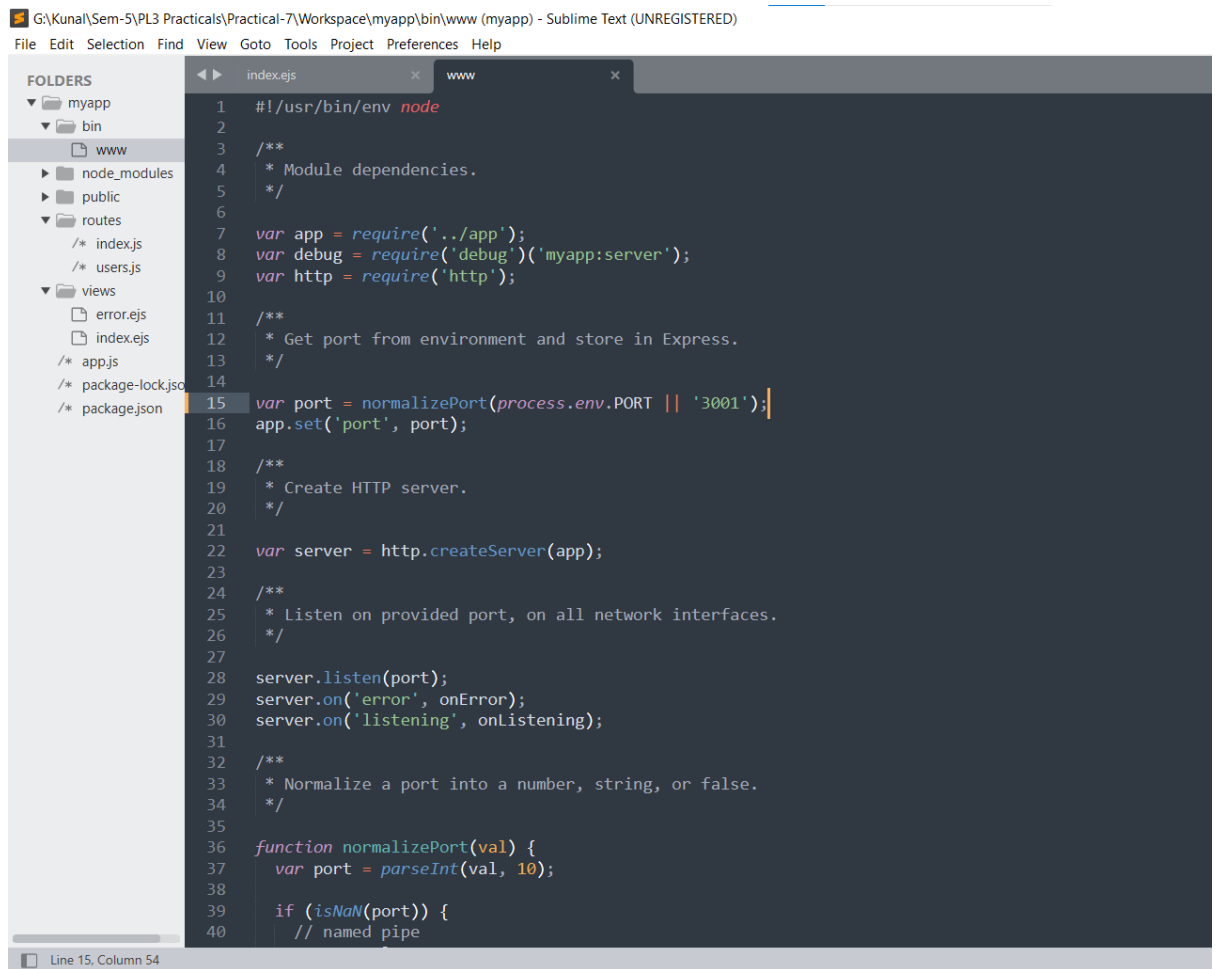


Express

Welcome to Express

3. Change the Node.js IP address and port number and start the server again.

Ans:



G:\Kunal\Sem-5\PL3 Practicals\Practical-7\Workspace\myapp\bin\www (myapp) - Sublime Text (UNREGISTERED)

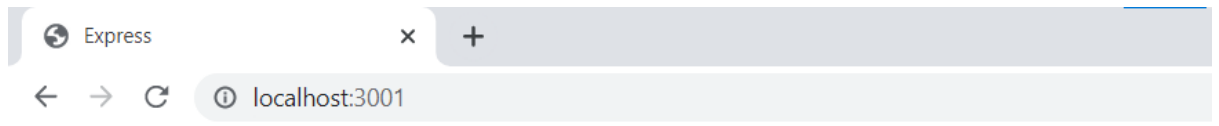
File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

- myapp
 - bin
 - www
 - node_modules
 - public
 - routes
 - index.js
 - users.js
 - views
 - error.ejs
 - index.ejs
 - app.js
 - package-lock.json
 - package.json

```
1  #!/usr/bin/env node
2
3  /**
4   * Module dependencies.
5   */
6
7  var app = require('..../app');
8  var debug = require('debug')('myapp:server');
9  var http = require('http');
10
11 /**
12  * Get port from environment and store in Express.
13  */
14
15 var port = normalizePort(process.env.PORT || '3001');
16 app.set('port', port);
17
18 /**
19  * Create HTTP server.
20  */
21
22 var server = http.createServer(app);
23
24 /**
25  * Listen on provided port, on all network interfaces.
26  */
27
28 server.listen(port);
29 server.on('error', onError);
30 server.on('listening', onListening);
31
32 /**
33  * Normalize a port into a number, string, or false.
34  */
35
36 function normalizePort(val) {
37   var port = parseInt(val, 10);
38
39   if (isNaN(port)) {
40     // named pipe
```

Line 15, Column 54



Express

Welcome to Express

Problem Statement 2:

1. Perform the fundamentals programming constructs such as operations, loops, variable assignments and print their values using Node.js REPL environment.
2. Save the REPL session to a file and reload the REPL session.

Ans:

```
Command Prompt - node
C:\Users\Pragati Kadam>node
Welcome to Node.js v14.3.0.
Type ".help" for more information.
> var x="Welcome to Nodejs"
undefined
> x
'Welcome to Nodejs'
> 1+1
2
> _+1
3
> var a=5
undefined
> var b=7
undefined
> a%b
5
> a/b
0.7142857142857143
> Math.round(a/b)
1
> for(var i=1;i<=5;i++)
... {
... console.log("Pl3 Practical 7")
... }
Pl3 Practical 7
Pl3 Practical 7
Pl3 Practical 7
Pl3 Practical 7
Pl3 Practical 7
undefined
> .helper
Invalid REPL keyword
> .help
Invalid REPL keyword
> .help
.break      Sometimes you get stuck, this gets you out
.clear      Alias for .break
.editor     Enter editor mode
.exit       Exit the repl
.help       Print this help message
.load       Load JS from a file into the REPL session
```

Command Prompt - node

```
C:\Users\Pragati Kadam>node
Welcome to Node.js v14.3.0.
Type ".help" for more information.
> .load Session
var x="Welcome to Nodejs"
x
1+1
_+1
var a=5
var b=7
a%b
a/b
Math.round(a/b)
for(var i=1;i<=5;i++)
{
console.log("Pl3 Practical 7")
}
.help
.help
^
Uncaught SyntaxError: Unexpected token '.'
> ■
```