

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

## Programming Lab 3

### Assignment / Journal submission

PRN/ Roll No: 2019BTECS00113

Batch: T5

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

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

```
C:\Windows\System32\cmd.exe
D:\College\TY\SEM U\PL3\Practical Solution>express --view=ejs practical7

create : practical7\
create : practical7\public\
create : practical7\public\javascripts\
create : practical7\public\images\
create : practical7\public\stylesheets\
create : practical7\public\stylesheets\style.css
create : practical7\routes\
create : practical7\routes\index.js
create : practical7\routes\users.js
create : practical7\views\
create : practical7\views\error.ejs
create : practical7\views\index.ejs
create : practical7\app.js
create : practical7\package.json
create : practical7\bin\
create : practical7\bin\www

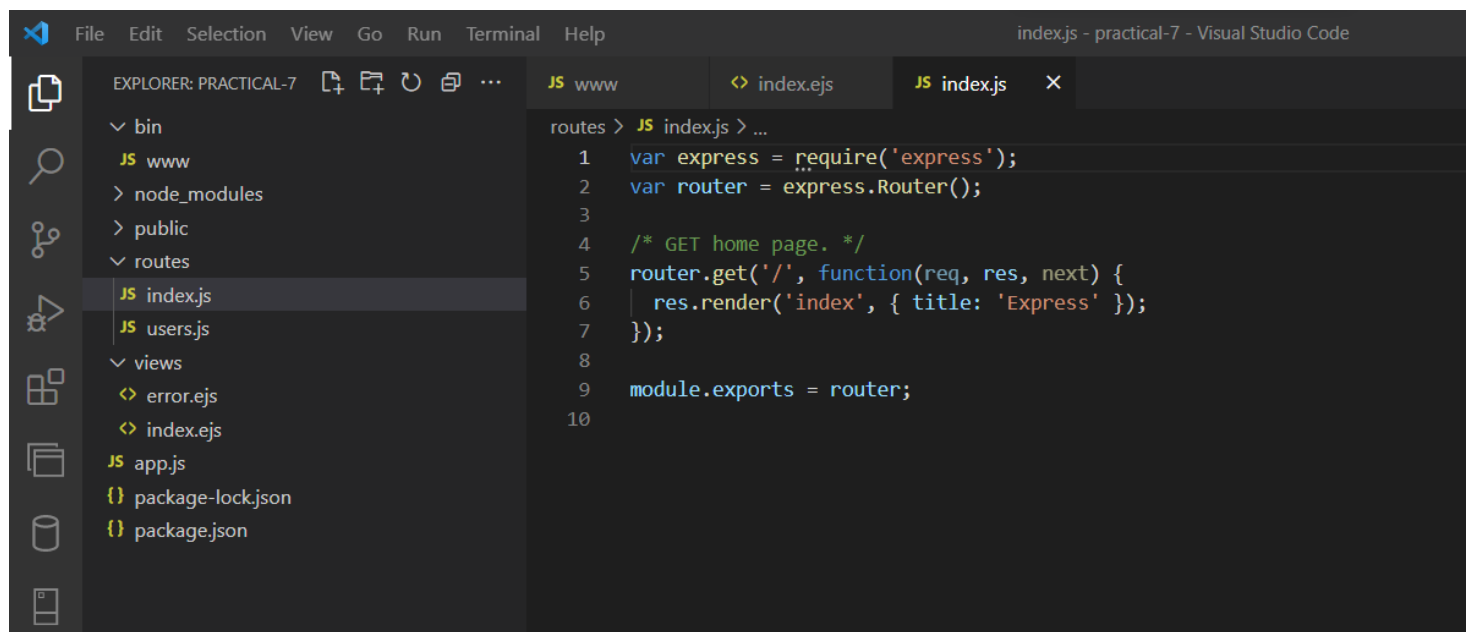
change directory:
> cd practical7

install dependencies:
> npm install

run the app:
> SET DEBUG=practical7:* & npm start

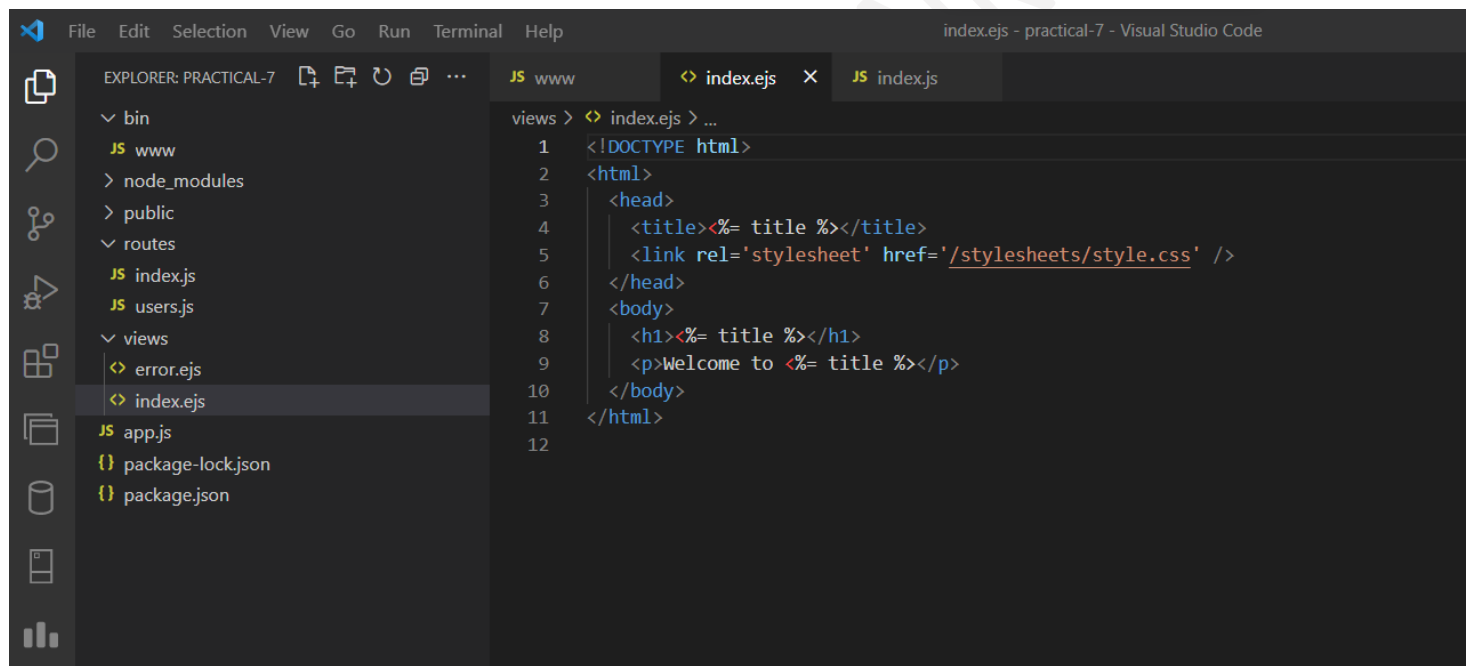
D:\College\TY\SEM U\PL3\Practical Solution>
```

## 2. Write a program to start a Node.js server on localhost and listens to the client requests on port number 3000.



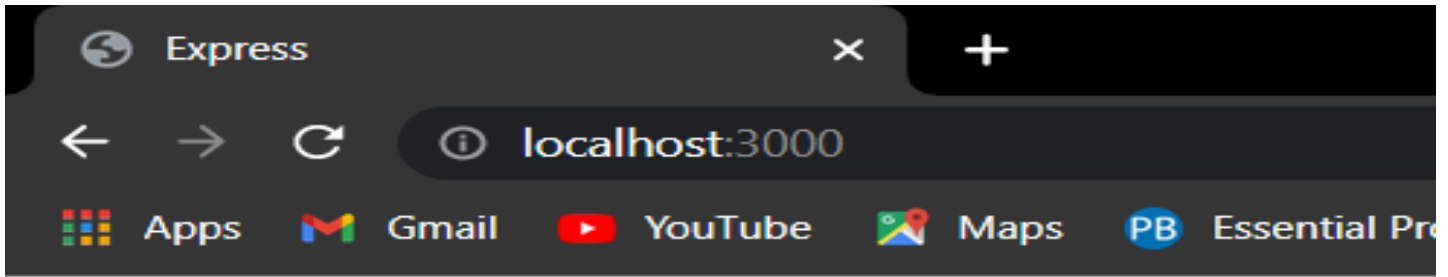
This screenshot shows the Visual Studio Code editor with the file explorer on the left displaying a project structure. The 'routes' folder is expanded, and 'index.js' is selected. The main editor area shows the content of 'routes > JS index.js > ...'.

```
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
```



This screenshot shows the Visual Studio Code editor with the file explorer on the left displaying the same project structure. The 'views' folder is expanded, and 'index.ejs' is selected. The main editor area shows the content of 'views > index.ejs > ...'.

```
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.

```
EXPLORER: PRACTICAL-7  JS www  X  index.ejs  JS index.js
bin
  JS www
  > node_modules
  > public
  > routes
  JS index.js
  JS users.js
  > views
  > error.ejs
  > index.ejs
  JS app.js
  {} package-lock.json
  {} package.json

bin > JS www > server.listen('192.168.98.199') callback
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 || '4000');
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, '192.168.98.199', () => {
29    console.log('Server is Listening on Port ' + port + " With address 192.168.98.199 " );
30  });
31  server.on('error', onError);
32  server.on('listening', onListening);
33
34  /**
35   * Normalize a port into a number, string, or false.
```

# Express

Welcome to Express

## Problem Statement 2:

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

```
D:\College\TY\SEM U\PL3\Practical Solution>node
Welcome to Node.js v12.19.0.
Type ".help" for more information.
> var x="Welcome to node js"
undefined
> x
'Welcome to node js'
> 2 + 3
5
> _ + 1
6
> var a=5,b=6;
undefined
> a+b
11
> b-a
1
> a%b
5
> a/b
0.8333333333333334
> Math.round(a/b)
1
> for(var i=0;i<5;i++) console.log("Lopp running , no - " + i+1)
Lopp running , no - 01
Lopp running , no - 11
Lopp running , no - 21
Lopp running , no - 31
Lopp running , no - 41
undefined
> .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
.save        Save all evaluated commands in this REPL session to a file

Press ^C to abort current expression, ^D to exit the repl
> .save pl3-practical7
Session saved to: pl3-practical7
> .exit

D:\College\TY\SEM U\PL3\Practical Solution>
```

```
D:\College\TY\SEM U\PL3\Practical Solution>node
Welcome to Node.js v12.19.0.
Type ".help" for more information.
> .load pl3-practical7
var x="Welcome to node js"
x
2 + 3
_ + 1
var a=5,b=6;
a+b
b-a
a%b
a/b
Math.round(a/b)
for(var i=0;i<5;i++) console.log("Lopp running , no - " + i+1)
Lopp running , no - 01
Lopp running , no - 11
Lopp running , no - 21
Lopp running , no - 31
Lopp running , no - 41
undefined
>
```