	Course Name: Advanced Web Technology	EXPERIMENT NO. 1	
	Course Code: 20CP314P Faculty: Komal Singh	Branch: CSE	Semester: VI

(To be filled by Student)

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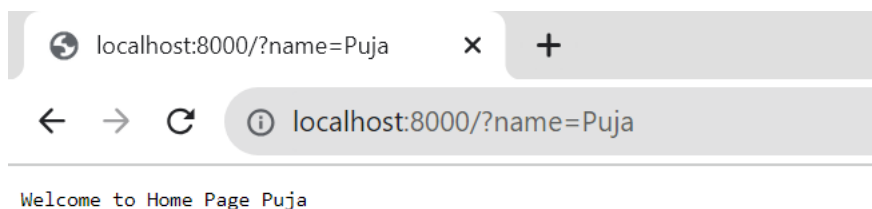
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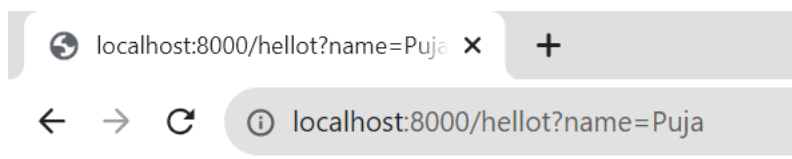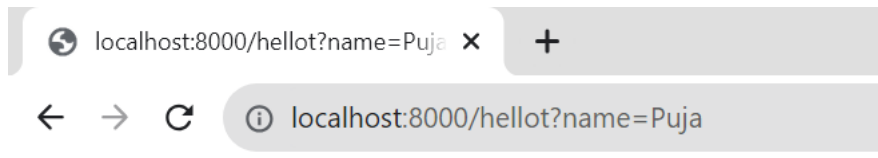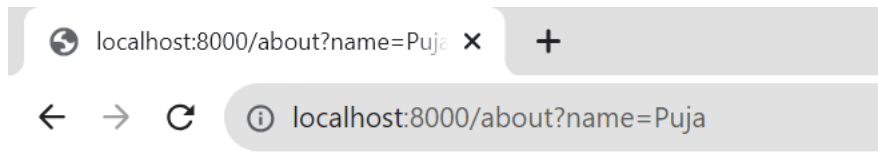Objective: Building a Simple Web Server in Node.js

Experiment: Implement the NodeJS Programs.

Q.1 Write Node JS programs for following modules:

a. http

```
const http = require("http");
const url = require("url");
http.createServer(
    function (req, res){
        res.writeHead(200, {
            "Content-Type": "text/plain"
        });
        const parsedUrl = url.parse(req.url, true);
        const {pathname, query} = parsedUrl;
        if(pathname === "/"){
            res.end("Welcome to Home Page " + query.name);
        } else if
        (pathname === "/about"){
            res.end("Welcome to about page "+ query.name);
        } else{
            res.end("Welcome "+query.name);
        }
    }).listen(8000, ()=>console.log("Server started at 8000"));
```

localhost:8000/?name=Puja   ×   +

← → C   ⓘ localhost:8000/?name=Puja

Welcome to Home Page Puja

Welcome to about page Puja

Welcome Puja

Hello
Hello World!

```
3    1709301161644: /hellot?name=Puja: NEW REQUEST
4    1709301161689: /favicon.ico: NEW REQUEST
5
```

b. filesystem

```javascript
const http = require("http")
const fs = require("fs")
const server = http.createServer((req, res) => {
    console.log(req.headers)

    res.write("This is the response from the server")

    const d = new Date()
    const log = `${d}:new request received\n`;
fs.appendFile('log.txt',log,(err,data)=>{});

switch(req.url){
    case "/":
        res.end("\n Home Page");
        break;
    default :
        res.end("\n default page");
        break;
}
res.end();
})
```
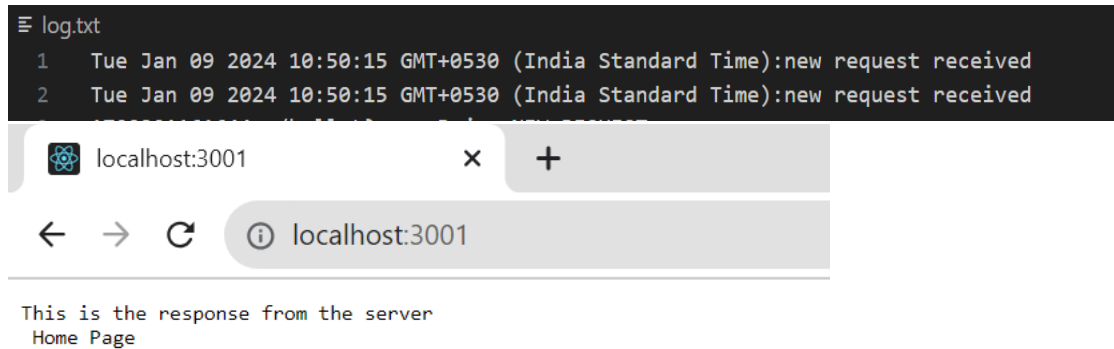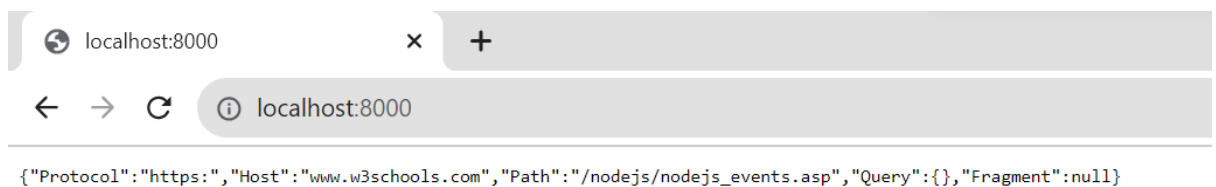
```
server.listen((3001), () => {
    console.log("Server is Running");
})
```

≡ log.txt
1   Tue Jan 09 2024 10:50:15 GMT+0530 (India Standard Time):new request received
2   Tue Jan 09 2024 10:50:15 GMT+0530 (India Standard Time):new request received

localhost:3001   ×   +

← → C   ⓘ localhost:3001

This is the response from the server
    Home Page

c. url

```
const url = require("url");
const http = require("http");
http.createServer(function (req,res){
const parsedUrl =
url.parse("https://www.w3schools.com/nodejs/nodejs_events.asp", true);
const data = {
'Protocol': parsedUrl.protocol,
'Host': parsedUrl.host,
'Path': parsedUrl.pathname,
'Query': parsedUrl.query,
'Fragment': parsedUrl.hash
}
const responseData = JSON.stringify(data);
res.setHeader('Content-Type', 'application/json');
res.end(responseData);
}).listen(8000, () => console.log("Server started at port: 8000"));
```

localhost:8000   ×   +

← → C   ⓘ localhost:8000

{"Protocol":"https:","Host":"www.w3schools.com","Path":"/nodejs/nodejs_events.asp","Query":{},"Fragment":null}

d. event

```
// Importing event module
const event = require("events");
// Create an instance of the event emitter class
const myEmitter = new event();
```

```
const myEventHandler = () =>{
console.log("I am Listening");
}
myEmitter.on('customEventWithData', (data) => {
console.log('Custom event with data:', data);
});
// Emit the custom event with data
myEmitter.emit('customEventWithData', "Hello World");
myEmitter.on("myCustomEvent", myEventHandler);
myEmitter.emit("myCustomEvent");
```

```
● PS D:\Semester 6\AWT\practicals\Lab 1> node event.js
  Custom event with data: Hello World
  I am Listening
○ PS D:\Semester 6\AWT\practicals\Lab 1>
```

Note: Please include snapshots of all commands, terminal sessions, localhost outputs, and log files in your documentation."