

Express is a node framework - A bunch of code that somebody else wrote which helps us add extra features in the project and also help us structure and organize our code.

We can use express to create a server and this server can run code.

To open a folder into atom: - navigate to the folder and hit - atom . and hit enter.

To install express: - npm install express

Now in js

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

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

app is a function which represents the express module.

```
app.listen(port_number);
```

EX: - app.listen(3000); - It will start to listen on port number 3000. A port is just a channel that we tuned our server to.

If we want to see when our port is tuned and server is started, we can add a function in the 2nd argument.

```
EX: - app.listen(3000, function() {  
    console.log("Server started on 3000")  
})
```

To make server responding to browser requests:-

```
app.get("/", function(request, response) {  
    response.send("Hello");
```

```
}) -> / represents route of server, request is the request that browser made, response is the response that server sent. When we type url(localhost:3000) and hit enter, browser will make request to the server, and then the callback function will triggered and server sends a response "Hello". We can also send html in response.
```

You can add different route in the first argument like /contact, /hobbies, /about, etc.

If you don't want to restart your server (node server.js), install nodemon.

Hit - nodemon server.js -

This will monitor the changes in server.js, if changes are made it will restart the server automatically.

If we want to send a file like html file to the browser as a response from the server: -

```
app.sendFile(__dirname + "/index.html");
```

__dirname is used to find the directory on any computer or cloud in case we deploy our application.

A simple calc program using server:

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

```
const bodyParser = require("body-parser");
```

```
const app = ex();
```

```
app.use(bodyParser.urlencoded({extended: true})); (Have to use this for getting data from browser via form)
```

```
// This means GET me index.html file on /
```

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

```
    res.sendFile(__dirname + "/index.html")
```

```
})
```

```
// This means grab the num1 and num2 from request from the browser and POST the result on /
```

```
app.post("/", function(req, res) {
```

```
    var result = Number(req.body.num1) + Number(req.body.num2);
```

```
    res.send("The answer is " + result);
```

```
}}
```

```
app.listen(3000, function() {
```

```
  console.log("Server started on port 3000 ");
```

```
})
```