Creating a project

- npm init
- npm install nodemon -D
- npm install express
- Create index.js
- Create .gitignore and add node_modules to it
- Add scripts to package.json
- NPM run dev and production environment

Start a NodeJS Server

```javascript
var server = app.listen(port, function (err) {
    if(err){
        onsole.log("Error in server setup")
    }
    else{
        console.log("Demo project app is listening at port " + port)
    }
})
```

Package dotenv

- Npm install dotenv
- const dotenv = require("dotenv").config()
- process.env.PORT

Implement a GET API

```javascript
app.get("/api", function(req, res){
    console.log("First get Request");
    res.json({"message":"Welcome to API implementation"});
})
```

```javascript
app.get("/api", function(req, res){
    console.log("First get Request");
    res.statusCode = 200;
    res.set('Content-Type', 'application/json');
    res.send({"message":"Welcome to API implementation"});
})
```

```javascript
app.get("/", function(req, res){
    console.log("First get Request");
    res.statusCode = 400;
    res.send({"message":"Welcome to API implementation"});
})
```

```javascript
    },
    res.writeHead(200, { "Content-Type": "application/json" });
    res.end(JSON.stringify(response_body));
```

HTTP Status Codes

1xx: Information

100 - Continue
Server accepts initials request; client should continue.

101 - Switching protocols
Server acknowledges a switch in protocol.

102 - Processing
Request is processing (WebDAV).

103 - Early Hints
Hints for preloading resources.

2xx: Success

200 - OK
Request succeeded.

201 - Created
Request fulfilled new resource created.

202 - Accepted
Request accepted, but not yet completed

204 - No Content
Response is successful, but there's no content to send in the body.

206 - Partial Content
Partial resource sent (for byte-serving).

3xx: Redirection

301 - Moved Permanently
Resource has been moved permanently.

302 - Found
Resource has been moved temporarily.

303 - See Other
Redirect to a different resource, typically after a POST operation.

304 - Not Modified
Resource hasn't changed since the last request used for caching purposes.

5xx: Server Errors

500 - Internal Server Error
Generic error message indicating a server-side issue.

502 - Bad Gateway
Upstream server sent on invalid response.

503 - Service Unavailable
Server temporarily unable to handle the request.

504 - Gateway Timeout
Upstream server did not respond in time.

4xx: Client Errors

400 - Bad Request
Request cannot be processed.

401 - Unauthorized
Authentication needed.

403 - Forbidden
Client is authenticated but locks permissions.

404 - Not Found
Resource cannot be found.

405 - Method Not Allowed
The HTTP method used isn't allowed for the resource.

406 - Not Acceptable
Server can't produce a response that matches the client's Accept headers.

409 - Conflict
Request conflicts with the current server state.

413 - Payload Too Large.
The request body is too large for the server to process.

429 - Too Many Requests
Client has made too many requests in a given amount of time.

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Router

```javascript
const express = require("express")
const router = express.Router()

router.get("/", function(req, res){
    console.log("GET request")
    console.log(req.query)
    res.send("hello")
})
```