Lab 8.1 - Implement an HTTP Route-Based Proxy

The labs-1 folder contains the following files:

- **package.json**
- **validate.js**

The **package.json** file has the following content:

```
{
  "name": "labs-1",
  "version": "1.0.0",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1",
    "start": "echo \"Error: start script not specified\" && exit 1"
  },
  "keywords": [],
  "license": "UNLICENSED"
}
```

Create an HTTP service that initializes when **npm start** is executed and listens on whatever the **PORT** environment variable is set to.

The service must be a transparent reverse HTTP proxy server such that a request to **http://localhost:{PORT}/?url={URL}** will respond with:

1. the status code of **{URL}**
2. the headers provided at **{URL}**
3. the contents of the body at **{URL}**

The `{URL}` will only ever hold HTTP URLs, there's no need to proxy HTTPS URLs.

The service must meet the following conditions:

- A request to any route other than `/` should respond with an HTTP **Not Found** response.
- A request to `/` without a **url** query-string parameter should result in a **Bad Request** HTTP response.
- The proxy only needs to support HTTP GET requests.

Run the following command to check whether the implementation was successful:

```
node validate.js
```

When successfully implemented the output should be similar to the following:

```
● ● ●                                    zsh                              ⌥⌘4
labs-1 % node validate.js

> labs-1@1.0.0 start /Users/davidclements/JSNSD-course/labs/ch-8/labs-1
> node app

✅ GET http://localhost:3000/bad-route responded with 404 response
✅ GET http://localhost:3000/ responded with 400
✅ GET http://localhost:3000/?url=http://localhost:53838/bad-route responded with 404 response
✅ GET http://localhost:3000/?url=http://localhost:53838/redir forwarded 301 response
✅ GET http://localhost:3000/?url=http://localhost:53838/ok forwarded 200 response
✅ GET http://localhost:3000/?url=http://localhost:53838/ok forwarded correct Content-Type header
✅ GET http://localhost:3000/?url=http://localhost:53838/ok forwarded correct Cookie header
✅ GET http://localhost:3000/?url=http://localhost:53838/ok forwarded correct data

PASSED

labs-1 % ▮
```