

CPSC 473 - Web Programming and Data Management

Spring 2015

Homework Assignment 5, due the week of March 16

In this homework assignment, you will build the server-side of a web application to play [Rock, Paper, Scissors, Lizard, Spock](#).

Use [Node.js](#) to implement a Web Service API with the characteristics listed below. Your program must use only the standard [Node.js API](#). Do not use any third-party modules, including [Express](#).

1. Your server should respond to an HTTP POST to the following URLs:
 - ☐ /play/rock
 - ☐ /play/paper
 - ☐ /play/scissors
 - ☐ /play/lizard
 - ☐ /play/spock
2. When the player does an HTTP POST to one of the URLs above, the server should randomly choose one of the responses ("rock", "paper", "scissors", "lizard", "spock") and determine the outcome of the game for the player ("win", "lose", or "tie").
3. Keep track of the number of wins, losses, and ties since the server was started.
4. Respond to each HTTP POST with a JSON object similar to the following:

```
{
  outcome: "win",
  wins: 3,
  losses: 2,
  ties: 0
}
```
5. Take screenshots of several rounds of the game showing the URL you are POSTing to and the JSON response returned being returned.

Submission

E-mail the following items to csuf.kenytt.net@gmail.com:

1. A link to a new GitHub repository containing your application
2. Screenshots showing your API in action

Tips

- The payload of the HTTP POST can be ignored.
- The easiest way to test your server is from the command line using the [cURL](#) utility and the Python [json](#) module, e.g.

```
$ curl --silent --request POST http://localhost:3000/play/rock | python -m json.tool
```

- If you have a partner, be sure to include the names of both partners in your e-mail.
- Set the Subject: line of your e-mail to
[CPSC 473 - Section 1] Assignment 5
or
[CPSC 473 - Section 2] Assignment 5

as appropriate (Wednesday night is Section 1; Monday night is Section 2).

Note: if you do not use the Subject: line exactly as given above, one point will be subtracted from your score for the assignment.

Grading

This exercise is worth 10 points: 2 points for each feature from the list above.