

ECS 162 Assignment 4, Spring 2019

Please submit by 10pm, Thurs May 2,
using Canvas.

You may do this assignment with a
partner.

In this assignment, we will make a little app that takes an input word and produces its palindrome; that is, given "bark" it produces "barkkrab". The interesting part is that we will compute the palindrome on the server.

Answering a query

Begin with [miniServer3.js](#), which was discussed in detail in Monday's lecture. Upload it to the server, and put it into a new directory /hello with a sub-directory /public. Edit miniServer3.js to put your port number into the global variable port. Install express using npm (npm install express). Put a file (a simple html file, for instance) in the /public directory, and run the server in /hello using node. Make sure the server can serve the static file, and answers queries about animals.

Now, change the server so that it detects queries of the form:

`http://server162.site:port/query?word=anything` Here port is your "port" number, and "anything" is any word. Add some code so that if it gets a query of this form, it should return the palindrome as JSON:

```
{ "palindrome": "anythinggnihtyna" }
```

If your server gets a request for a static file in your "public" directory, it should serve that file. If your server gets any other kind of HTTP request, it should return an error message, such as "Cannot find /whatever".

AJAX query

Now we will use our server to serve a page and respond to an AJAX query. In your /public directory, you can put this Web page [palindrome.html](#), which has a text input box and a submit button. Notice the submit button does nothing. Give it an onclick function, and add some javascript that gets the "value" property of the input box when the submit button is pressed.

Now have your code send the word to the server as an AJAX request, using the format we programmed the server to understand. You can use the XMLHttpRequest object, exactly as we did in the last project. The one small difference when you are communicating with your own server instead of a CORS server is that the url is just "query?word=...", that is, you don't specify the domain name part of the url since the browser knows it. The callback function that is run when the response comes back should get the palindrome out of the returned JSON, and display it on the page.

If you want to, you can make the page prettier by adding some css; feel free to add to the html.

Turn in Instructions

Hand in the assignment as a zip file, using Canvas. To zip up the entire server directory, including the public directory, go to the directory above "hello", and on the command line, type:

```
zip -r hello.zip hello
```