Homework 1

URLs and Requests

Due 1-21-2020 End of Day

# Reading

* **What is a URL?**  
  <https://developer.mozilla.org/en-US/docs/Learn/Common_questions/What_is_a_URL>  
  A good overview of what a URL is and the various parts that make one up. Focus on the “Basics: anatomy of a URL” section.
* **HTTP Requests**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Messages>  
  In class we took a look at requests in the browser using the inspector’s network tab, and created a few by hand. This article describes the various components in more detail.
* **Request Methods**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods>  
  In class we looked at GET and POST methods, though more exist. This page describes their general purpose.
* **HTTP Headers**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers>  
  This page has links to descriptions of many headers. Don’t worry about reading all of those. Focus on the first few paragraphs that discuss the overall purpose of headers.
* **Content Type Header**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Content-Type>  
  This is a header that will come up a lot in class and is important in requests and responses.
* **Safe Requests**<https://developer.mozilla.org/en-US/docs/Glossary/Safe>
* **Idempotent Requests**<https://developer.mozilla.org/en-US/docs/Glossary/idempotent>
* **GET Request**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods/GET>
* **POST Request**  
  <https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods/POST>

# Questions

1. What are the 6 parts of a URL?

2. Where do parameters appear in a URL? What symbol do they follow?

3. What symbol separates parameters in a URL?

4. How is a parameter with multiple values represented in a URL?

HINT: In the echo application use the second form with a hobby field. Select several hobbies and hit submit, then take a close look at the URL in your browser.

5. Broadly describe what an HTTP request is.

6. What is the general role headers?

7. What is the role of a request’s method?

8. What does it mean for a request to be considered safe?

9. What does it mean for a request to be considered idempotent?

10. Should a request using the GET method ever change the server’s state?

11. What is the POST method used for? Does it change the server’s state?

12. When using the POST method, what advantage does multipart/form-data have over application/x-www-form-urlencoded?

13. What is the role of the content-type header?

14. What is the role of the “boundary” in a content-type header?