

1. What is an abstraction? Provide an example. 5

A simplified version of data e.g. a shapefile. What we think is necessary. It conceptualized data

2. What is an interface? Provide an example. 7

A way to interact with data e.g. coding

3. What is the role of abstractions and interfaces in computer science? e.g. why are they important?

a. This is how we get and interact with data so we can interpret it. Language

4. What are the core abstractions for a computer?

, binary data, code

5. What are core abstractions for GIScience?10

Vectors, raster, etc

6. Describe how HTTP works with GET and POST methods

GET is used to request data.

POST is a way to receive it

It shows a know url and links to the methods.

7. How would you use CURL to download a file from this web address:

[http://www.thisWebSite.com/file.zip? \(Links to an external site.\)](http://www.thisWebSite.com/file.zip? (Links to an external site.))

Curl -o /filezip “[http://www.thisWebSite.com/file.zip? \(Links to an external site.\)](http://www.thisWebSite.com/file.zip? (Links to an external site.))”

8. How would you use the python requests library to download the same file described in 7?

Import requests

Import zipfile

Open(url, “wb”)write. (requests.content)

With `zipfile.Zipfile("", "r")` as `zip_ref`:

`Zip_ref.extractall("Destination")`

9. What is an ETL?

Extract, transform, load. A pipeline to data.