

Scripting Languages:

Know some of the differences and trade-offs between scripting languages and systems languages - dynamic typing, compiled vs. interpreted, compile-time type checking vs. runtime type-checking, high level vs. low level, execution speed vs. development speed, etc.

Know what it means for a variable to be “immutable”

Know what recursion is and be able to identify an example in code

Bash:

Know some of the reasons or purposes for writing shell scripts

Know how to modify a file's permissions

Know what pipes are and what they are used for

Know the list of linux programs we looked at and what each one does

Know how to display the contents of a file

Know what I/O redirection is and which redirection operators do what

Perl:

Understand the difference between scalar and list context

Know the 3 types of scalars - numbers, strings, and references

Know how to declare and assign values to and retrieve values from scalar variables

Know the 2 types of containers - arrays and hashes

Know how to declare an array and assign and retrieves values from an array

Know the differences between single-quoted strings and double-quoted strings

Know how to concatenate strings together using the . operator

Know how to declare a hash and assign and retrieve values from a hash

Know the 3 I/O streams STDIN, STDOUT, and STDERR and what each one does

Know what it means to redirect a stream's output

Python:

Know how to declare Python variables, assign values to variables, and retrieve the value of variables

Know which Python data types are mutable and which ones are immutable

Know how to write your own function

Know that a function always returns a single object or the null object None

Know what the keyword continue and break do when used inside of a loop

Know how scoping works and how names are resolved

Know how global variables work and which scope they are bound to

Know what the container types are in Python - strings, tuples, xrange sequences, and lists

Know the names of the 3 I/O stream or file objects - stdin, stdout, and stderr

Know what the print>>() function does

JavaScript:

Know what kind of inheritance model is used in JS - prototypal inheritance, not classes

Know what JSON is and what it is used for

Know what the event loop is and its purpose

Know what an API is

Know the 3 major components of the web

Know what the DOM is and what its purpose is

Know what function scope is and how this works with the var keyword

Know what a callback function is