Final Exam Study Guide   CIS 101 Fall 2022

Final Exam - P2 This is the only time the Final Exam may be taken. You must use the classroom computers in P2 and Canvas. This exam is closed internet and closed JES, no programming tools, and no external websites. You may use scratch paper, the 'Python Tool Box" and your notes. Dress and Grooming Standards will be enforced.

Topics to study:

1. What are the differences between data types: integer, float, string?
2. Know how to use the math and modulo operators.
3. What are the reserved words in Python used for? (def, print, for, in, if, else, elif, and, or, not, while, break, continue, import, return)
4. Be able to understand and explain a sequence of Python instructions.
5. How does the + operator work among strings and numbers?
6. How does the * operator work among strings and numbers?
7. How do you create a comment in Python?
8. Know how to use the range function with 1, 2, or 3 arguments.
9. Look at an incorrectly written function, and fix it.
10. Look at a function and describe what it does and how it works.
11. How do you compute the length of a list or string?
12. How do you test for equality/inequality in Python?
13. Know how to use if, elif, and else.
14. Use and, or, and not to build complex decisions.
15. Know how to use indexing to look up individual characters within a string.
16. Know how to "slice" a string.
17. Know how to use shortcut operators such as +=, -=, *=, /=
18. Be familiar with the names and behaviors of Python methods for string-processing.
19. Know the difference between a for loop and a while loop.
20. Convert a for loop to a while loop.
21. Convert a while loop to a for loop.
22. Know how to create an "infinite" while loop.
23. Know how to "break" out of a loop early.
24. What three things does every while loop need?
25. Look at a loop, and determine how many times it will run.
26. Know what makes "efficient" code.
27. Know how to use the file open function and the file read and close methods.
28. Know how to use the sys list "argv" to pass arguments to Python from the command line.
29. Use import to access functions from modules.

Match vocabulary words to their definitions:

- string
- string concatenation

- string duplication
- variable
- function
- algorithm
- program
- parameter / argument
- comment
- reserved word
- block
- path
- loop
- for
- while
- break
- continue
- path separator
- encoding
- list
- bug
- bit
- byte
- return
- if / elif / else
- command-line argument
- method
- import