CSCI 141 Final Review topics

There will be tasks drawn from:

1. Weekly Quizzes
2. Textbook
3. Sample questions posted to Canvas / Google drive
4. Handouts posted on Canvas / google drive
5. Questions in notes on google drive
6. Labs
7. Syllabus
8. Assignments

Topics:

1. Week 1
   1. Print()
   2. Parts of a computer
      1. CPU
      2. Hard drives
      3. RAM
   3. What is an algorithm
   4. What is pseudocode
2. Week 2
   1. What is a data type
   2. str()
   3. int()
   4. float()
   5. input()
   6. type()
   7. Variables
   8. Assignment operator
   9. Binary and decimal conversion
   10. bits
   11. ASCII
   12. System arguments
   13. newline
   14. Variable naming conventions
   15. Sep
   16. End
   17. Modulus
3. Week 3
   1. Keywords
   2. Unicode
   3. Debugging
   4. \* and + with strings
   5. Bool data type
   6. Arithmetic comparison operators
   7. And
   8. Or
   9. Not
   10. Truth tables
   11. ==
   12. !=
   13. XOR
   14. If statements
   15. Else statements\ Elif
   16. Operators
   17. Operands
   18. Difference between statement and expression
   19. Function evaluation and returns
   20. Order of operations
   21. Floating point and integer division
4. Week 4
   1. While
   2. Inplace oerators -= += etc
   3. Random
   4. Import
   5. For loops
   6. Nested for loops
   7. Nested while loops
   8. Lists
   9. Range
   10. Turtles
5. Week 5
   1. More range
   2. Nested lists
   3. Objects
   4. Methods
   5. Functions
      1. Parameters and arguments
      2. Return values
      3. Variable scope
      4. Global variables vs local variables
   6. Functions calling functions
   7. Strings as sequences
   8. String indexing
6. Week 6
   1. Strings
      1. Split()
      2. List()
      3. + and \* operators with strings
      4. Len function
      5. Iterating over strings with ‘For’ loop
      6. In and not in
      7. Slicing strings
7. Week 7
   1. Tuples
      1. Packing
      2. Unpacking
      3. Lists vs Tuples
      4. List extend vs +
      5. Return values vs effects
   2. Functions
      1. Doc Strings
      2. Scope
      3. Mutability
   3. Strings
      1. Upper()
      2. Lower()
      3. Find()
      4. Replace()
      5. < > == !=
      6. Strings being immutable
      7. Index string
      8. Negative indicies for strings
   4. Lists
      1. Index
      2. Slice
      3. In and not in on lists
      4. + and \* for lists
      5. Append
      6. Extend
      7. Passing lists into functions
      8. Insert
      9. Remove
      10. Del
      11. Shallow copy vs deep copy
8. Week 8
   1. Strings
      1. Isdigit()
      2. Strip()
   2. Dictionaries
      1. Creating
      2. Assigning values
      3. Indexing
      4. Get
      5. In
      6. Del
      7. Iterating over keys
      8. Iterating over values
      9. Methods: Keys, Values, Items
      10. Dictionaries in lists
9. Week 9
   1. File I/O
      1. Read
      2. Write
      3. Open
      4. Close
      5. Iterating over lines
10. Week 10
    1. Mutable and immutable objects
       1. Multiple variables referring to same object
       2. Memory diagrams
       3. Index
    2. Lists
       1. Insert
       2. Remove
       3. del
    3. File I/O
       1. Readlines
       2. Seek
       3. Tell
    4. Strings
       1. Lexographic ordering
       2. Slicing
    5. Dictionaries
       1. Get()
       2. Dictionaries in Lists
       3. Passing dictionaries to functions