CSC 461 Programming Languages

FALL 2024

Dr. Stephen Krebsbach

Ass #4 - 10 points Due: Monday 11th 11:59 PM

Please complete/answer the following questions and record using the Online Quiz Format.

Each question 1 pt.

1) A **Primitive** data type is defined as:
   a. Data type not being defined in terms of other types
   b. Those with highest precedence
   c. Those that can hold primary numbers
   d. A collection of secondary data types

2) Boolean values could be represented as 0/1 and only use one bit but usually use a larger memory cell than 1 bit. Why?
   a. Most machines do not access a single bit of memory efficiently
   b. So they can compact bits together
   c. It is more readable
   d. True or false is better than 0 or 1

3) One of the most important design issues for Character strings is:
   a. Does it have a Dynamic or Static length
   b. What language is it in
   c. Are white spaces used
   d. If we use the word" string" or "str " to define it

4) Requiring that the range of an array subscript be checked to see if it is in bounds helps mainly with:
   a. Reliability
   b. Muti-dimensional arrays
   c. Arrays of Boolean type
   d. Writability

5) If the programmer wants to use an array to hold a look-up table to be used for the whole program, they should choose what type of storage binding?
   a. A fixed stack-dynamic Array
   b. A static Array
   c. Explicit heap-dynamic Array
   d. Static scoping

6) The Pointer type is designed to be used for two distinct purposes. One is to provide a form of indirect addressing. The other is to ___
    a. Access anonymous variables.
    b. Make code more readable
    c. Make code more reliable
    d. Allow Pass-by-value

7) Anonymous variables can cause issues in a type checking system that uses _____
    a. Name equivalence
    b. Real numbers
    c. Static scoping
    d. Stacks

8) Including Type Coercion may be seen as a detriment because it _____
    a. can be seen as weakening a strongly typed language
    b. makes the used explicitly handle mix-mode typing issues
    c. complicates static scoping
    d. hurts writability

9) A language is considered Strongly Typed if
    a. real numbers are not allowed
    b. type errors are always detected
    c. all types are set at compile time
    d. all typing errors can be detected at compile time

10) A major difference between a Pointer type and Reference type is that
    a. Only Pointer types are used in Heap Management
    b. Only Reference types are used in Heap Management
    c. Arithmetic can be done on Pointers
    d. They are the same thing, but languages just use different words for it