weekly-Exercise - 07

## ICS 365-51 Metropolitan State University/MN

## Week 8 Due 11:59pm, Sunday, Oct. 16, 2022 Fall 2022

## Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Pong Lee\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Please complete both Parts I and II and then upload the results to D2L under the dropbox for Weekly Exercise 07 before the deadline (total 20 points).

## Part I: Based on the discussion in Lecture 7, please either bold or highlight your answers below, only one answer per question. (1 point each, total 10 points)

1. Based on the discussion in Chapter 8, "()" defined in counter-controlled loops in F# means \_\_\_\_\_\_

A) to decrease the loop variable by 1;

B) to do nothing and return nothing;

C) to generate an error message;

D) to call the empty method.

2. Based on the discussion in Chapter 8, what are the two general categories of the selection statements?

A) Entry-decision checking and exit-decision checking

B) If-statements and While-loops

C) User-defined selections and system-defined selections

D) Two-way selectors and multiple-way selectors

3. Which of the following programming languages can use indentation to define either a then-clause or an else-clause in an if-statement?

A) C

B) Java

C) Perl

D) Python

4. Based on the discussion in Chapter 8, which of the followings is not one of the design issues for two-way selection statements in the early development of programming languages?

A) How are the "then" and "else" clauses specified?

B) How should the meaning of nested selectors be specified?

C) Whether to allow to declare a variable with a selection statement?

D) What is the form and type of the control expression?

5. Based on the discussion in Chapter 8, which of the following design issues is considered in logically-controlled loops but not in counter-controlled loops?

A) Should it be legal for the loop variable or loop parameters to be changed in the loop body, and if so, does the change affect loop control?B) Should the control variable/expression be pretested or post-tested?

C) What are the type and scope of the loop variable?D) Should the loop parameters be evaluated only once, or once for every iteration?

6. Based on the discussion in Chapter 9, defining two or more constructors for a class in Java is an example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A) method overloading

B) method ambiguity

C) method overriding

D) invalid definition

7. Based on the discussion in Chapter 9, which of the followings is not one of the fundamentals of subprograms?

A) The calling program is suspended during execution of the called subprogram;

B) Control always returns to the caller when the called subprogram’s execution terminates;

C) The number of the parameters allowed in a calling program is limited to 2;

D) Each subprogram has a single-entry point.

8. Based on the discussion in Chapter 9 about C language, which of the following statements is true about the C program list on left?

|  |  |
| --- | --- |
|  | A) Variable x is passed by value;  B) Variable i is a formal parameter;  C) Function fun returns an integer value of 6, not 4, because  that variable x is passed by reference;  D) Variable i's address is passed to variable x. |

9. Based on the discussion in Chapter 9, Which of the following programming languages is the language where the pass-by-reference can be specified by preceding the formal parameter with inout?

A) C#

B) Fortran 95+

C) PHP

D) Swift

10. Based on the discussion in Chapter 9, which of the following statements is not true?

A) A subprogram call is an explicit request that the subprogram be executed;

B) The signature of a subprogram is the number, order, and types of its parameters;

C) A subprogram declaration provides the protocol, but not the body, of the subprogram;

D) A formal parameter represents a value or an address used in the subprogram call statement

**Part II: Please study the lecture slides and handouts covered this week to complete the following tasks: (Total 10 points)**

Given a C program as shown below, please write similar programs in Java and Python on our Linux server, *sp-cfcsc01.metrostate.edu*. Please "*cat*" your programs before either compiling and executing or executing it with the testing case provided, and then include the corresponding screenshots below:

A *C* program, *myFileD.c*, which is *a simplified version of the C program provided in HandoutB,* with its execution on /etc/hosts

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| --- |
|  |

2.1) Please provide the screenshot of a similar program in **Java** with its execution on /etc/hosts below (5 points):

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|  |

2.2) Please provide the screenshot of a similar program in **Python** with its execution on /etc/hosts below (5 points):

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|  |