

WEEKLY-EXERCISE - 01

ICS 365-51

Metropolitan State University/MN

Week 1

Due 11:59pm, Sunday, Aug. 28, 2022

Fall 2022

Name: _____ Score: _____

Please complete both Parts I and II and then upload the results to D2L under the dropbox for Weekly Exercise 01 before the deadline (total 20 points).

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

1. Based on the discussion on “compilation process,” “syntax analysis” is defined as to
 - A) generate machine code
 - B) convert characters in the source program into lexical units
 - C) generate intermediate code
 - D) transform lexical units into parse trees which represent the syntactic structure of program
2. Which of the following category of the programming languages does Python belong to?
 - A) Markup
 - B) Logic
 - C) Imperative
 - D) Functional
3. Based on the discussion on Programming Language Evaluation Criteria in Chapter 1, "support for abstraction" refers to
 - A) A relatively small set of primitive constructs can be combined in a relatively small number of ways
 - B) The ability to define and use complex structures or operations in ways that allow details to be ignored
 - C) Presence of two or more distinct referencing methods for the same memory location
 - D) Few constructs, a small number of primitives, a small set of rules for combining them
4. In Java, a user can increment a simple integer variable in each of the following ways except
 - A) `count++`
 - B) `++count`
 - C) `count = count + 1`
 - D) `count =+ 1`
5. Which of the following is not considered as one of the characteristics of von Neumann computers?
 - A) Instructions and data are piped from memory to CPU
 - B) Data and programs stored in memory
 - C) Multiple CPUs and parallel processing
 - D) Memory is separate from CPU

6. Based on the discussion in Chapter 1, which of the following statements is incorrect for Just-in-Time (JIT) implementation systems?
- A) The intermediate language of a subprogram is compiled and translated to machine code whenever the subprogram is called. In other words, the machine code of a subprogram is not kept for subsequent calls;
 - B) JIT systems are widely used for Java programs;
 - C) The source programs are initially translated into an intermediate language;
 - D) In essence, JIT systems are delayed compilers.
7. Which of the following programming languages has been mainly used for business applications?
- A) Prolog
 - B) LISP
 - C) Fortran
 - D) COBOL
8. All the following are most important criteria for evaluating programming languages except
- A) Writability
 - B) Tangibility
 - C) Readability
 - D) Reliability
9. Based on Figure 1.3 on page 24 of your textbook, which of the following functions does not work with “symbol table” in the compilation process?
- A) Intermediate code generator and semantic analyzer
 - B) Lexical analyzer
 - C) Syntax analyzer
 - D) Optimization
10. Which of the following statements is not true?
- A) The connection speed between CPUs is the bottleneck of von Neumann computers
 - B) The major methods of implementing programming languages are: compilation, pure interpretation, and hybrid implementation
 - C) Program instructions often can be executed much faster than the speed of the connection
 - D) Major influences on language design have been machine architecture and software development methodologies

Part II: Please study the handouts and follow the steps provided in the handouts to complete the following tasks: (Total 10 points)

1. Please provide the screenshot that shows that you have changed your password on our Linux server properly: (please replace the example shown below with yours, 3 points)

```
ics365fa2235@sp-cfsics:~$ passwd
Changing password for ics365fa2235.
Current password:
New password:
Retype new password:
passwd: password updated successfully
ics365fa2235@sp-cfsics:~$ ssh ics365fa2235@sp-cfcsc01
ics365fa2235@sp-cfcsc01's password:
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-122-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Wed Jul 20 12:47:27 CDT 2022

System load:  0.0           Processes:            314
Usage of /:   18.5% of 195.57GB Users logged in:      1
Memory usage: 9%           IPv4 address for ens160: 10.1.215.11
Swap usage:   4%

 * Super-optimized for small spaces - read how we shrank the memory
   footprint of MicroK8s to make it the smallest full K8s around.

https://ubuntu.com/blog/microk8s-memory-optimisation

0 updates can be applied immediately.

Last login: Wed Jul 20 12:42:49 2022 from 73.94.237.97
ics365fa2235@sp-cfsics:~$
```

2. Please provide the screenshot that shows you have successfully created your homepage on our Linux server properly. (please replace the example shown below with yours, 3 points)

```
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This web site is still under the construction. Please send your comments to Testing Site.
Here is a website for learning Unix/Linux and Shell Programming:
What is "the Shell"? by W. E. Shotts, Jr.
```

3. Please add two more links for learning Linux and Shell Programming to the web page shown above and provide the screenshot similar to the one provided below. You need to use a proper title to replace either “My first selection” or “My second selection” on your updated page: (please replace the example shown below with yours, 4 points)

```
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This web site is still under the construction. Please send your comments to Testing Site.
Here are three websites for learning Unix/Linux and Shell Programming:
What is "the Shell"? by W. E. Shotts, Jr.
My first selection
My second selection
```