

## Unit 3 Chapter 12 Assignment

**Grading Information:** This Program is **due** on **Date Specified**.

Comments are **REQUIRED**; flow charts and pseudocode are **NOT REQUIRED**.

Directions	Points
<p>The files must be called <b>&lt;LastInitialFirstInitialUnit3Ch12.java&gt;</b></p> <p><i>Proper coding conventions required the first letter of the class start with a capital letter and the first letter of each additional word start with a capital letter.</i></p> <p>Only submit the <b>.java</b> file needed to make the program run. Do not submit the <b>.class</b> file or any other file.</p>	5%
<p><b>Style Components</b></p> <p>Include properly formatted prologue, comments, indenting, and other style elements as shown in Chapter 2 starting page 64 and Appendix 5 page 881-892.</p>	5%
<p><b>Topics covered in chapter</b></p> <p>Topics with * are covered in this assignment. Ensure you use every item listed below in your completed assignment.</p> <ul style="list-style-type: none"><li>*Integer Types and Floating Point Types</li><li>*Char Type and ASCII Character Set</li><li>*Type Conversions</li><li>*Prefix/Postfix Modes for Increment/Decrement</li><li>Embedded Assignments</li><li>Conditional Operation Expressions (ternary)</li><li>Short Circuit Evaluation</li><li>Empty Statement</li><li>Break statement within a loop</li><li>*For loop header detail</li><li>Enumerated types</li><li>*Hexadecimal, Octal, and Binary Numbers</li></ul>	
<p><b>Basic Requirements</b></p> <p>Write a program that gets input for a string, then output a substring of this string character by character showing the upper case, lower case, initial case, binary, and hex values of each character. Repeat until quit.</p>	
<p><b>LiFiUnit3Ch12.java</b></p> <ul style="list-style-type: none"><li>Get input for a string containing both numbers and letters of any length</li></ul>	80%

- Get input for a substring length (0 to quit)
- Use a for loop with postfix notation to increment through the string and printing the following:
  - Use a “ternary operator” (pg. 531) that sets the substring length to the actual string length if the value entered for the substring is longer than the actual string length
  - The initial digit/character
  - The ASCII value of each character
  - The ASCII value of each integer converted to a string
    - Notice the columns for the char/int
    - Hint: isdigit would work great for this.
  - The Hex value of each integer/character output in upper case
    - Use the Integer wrapper class to convert to Hex
- Output “Thank you for playing!”
- Hints
  - The ASCII, and Hex are based on the initial value entered

Sample output is provided below. Be sure to mimic it exactly.

Sample output is provided below. Be sure to mimic it exactly except for the string entered, substring length. The layout should be exact.

10%

**NOTE:** Complete your activity and submit it by clicking “Submit Assignment”

## Total Percentage

100%

## Sample

Your output will vary based on input.

```

Please enter a string of any length: Ken123
Initial ASCII(char)      ASCII(int)      Hex
K          75              49              4B
e          101             50              65
n          110             51              6E
1          49              48              31
2          50              47              32
3          51              46              33
Thank you for playing!

```

Please enter a string of any length: 123ABCabc

Initial	ASCII(char)	ASCII(int)	Hex
1		49	31
2		50	32
3		51	33
A	65		41
B	66		42
C	67		43
a	97		61
b	98		62
c	99		63

Thank you for playing!