**CS2750 System programming and Tools Fall 2018**

**KEY TO** **QUIZ #5 [12 points]**

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1. [2 points] Indicate a mistake in the following function definition:

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| --- | --- |
| function (**arg**){  echo $arg  } | *Answer:* Functions in bash scripts are not supposed to have parameters, so parentheses must be empty (highlighted on the left). |

1. (a) [6 points] Based on the bash script in the left column, fill in blanks in the script on the right side so that a function parameter will be passed by reference.

|  |  |
| --- | --- |
| #!/bin/bash  ##pass by value  function newFn1()  { echo a is $1;  let $1–=2;  echo now a is $1;  }  a=5;  newFn1 $a;  echo after newFn1 $a | *Inserted pieces are shown in bold*  #!/bin/bash  ##pass by reference  function newFn2()  { echo a is **{!1}**;  let **$1–=2**;  echo now a is **{!1}**;  }  a=5;  newFn2 **a**;  echo after newFn2 $a |

(b) [2 points] Show the output of the version of the script where the parameter is passed **by reference** to the function newFn2

*Output:*

a is 5

now a is 3

after newFn2 3

1. [2 points] Two lines from the file HighScores are shown below:

Calculus1 103.7 2017

Calculus2 98.3 2016

(a float value is the highest score in the class, an integer number is the year). Write 2 versions of sort command (sorting should be performed in ascending order):

|  |  |
| --- | --- |
| 1. to sort this file by subjects:   sort AverGrades  or: sort +0 -1 AverGrades | 1. to sort this file by the second field (scores):   sort -n +1 -2 AverGrades |
|  |  |

You can also use an alternative syntax discussed in the textbook.