

CS 60
FOURTH QUIZ
May 4, 2010

WRITE ALL YOUR ANSWERS ON SPACE PROVIDED.
ANSWER ALL FOUR QUESTIONS. TOTAL POINTS ARE 30.
YOU MAY ASSUME THAT EACH SECTION OF CODE BELOW IS IN ITS
OWN FILE WHEN COMPILED

NAME: _____

1 { Circle for each part True or False depending whether or not the statement is true or false. Each question is worth 1.5 Point }

- { **True** or False } The declaration `int *** t` indicates that `t` is a pointer to a pointer to a pointer to an `int`.
- { True or **False** } When a program terminates normally we know it did not have any memory leaks.
- { **True** or False } A static local variable in a function can be used to count the number of times the function is invoked.
- { **True** or False } In C++ it is valid to have the functions `int sqrt(int x);` and `float sqrt(float x);` defined one after the other.
- { True or **False** } It is possible to pass parameters by reference in C++ and in C.
- { **True** or False } The expression `!(a && b)` is the same as `(!(a)) || (!(b))`, where `a` and `b` are Boolean variables.
- { True or **False** } In class we discuss the C function `xalloc()` to allocate memory dynamically in the area of memory called the Stack.
- { True or **False** } In C++ an `inline function` means that the function must be defined in one line.
- { True or **False** } In C we use `new` to allocate space from the area of memory called the Heap.
- { **True** or False } C++ has Boolean variables.
- { **True** or False } In a C function (called `YYY`) it is possible to jump and execute the function named `func` even if throughout the code of function `YYY` we do not have anywhere the the invocation `func()`.

- { **True** or **False** } The two lines of code `int * xxx; *xxx = 20.5;` (one after the other) can cause a segmentation fault.
- { **True** or **False** } In a makefile, the lines with the commands for each target must start seven spaces from the beginning of the line.
- { **True** or **False** } In a makefile, if all the dependencies are older than all the targets, none of the commands in the makefile are executed.
- { **True** or **False** } In **C** we use `free` to delete (deallocate) memory acquired through `calloc` or `malloc`.
- { **True** or **False** } When `x` is declared as an integer, then the value of `x` equal to 1 after executing the statement `x = (5*5 == 25);`
- { **True** or **False** } The local (auto) variables in **C** are located in an area of memory which in **C** is called the Heap.
- { **True** or **False** } The predecessor of the **C** language was the **C++** language.
- { **True** or **False** } The line `int *fx(int);` means that `fx` is a function that takes one `int` argument and returns an `int`.
- { **True** or **False** } It is possible to invoke function `main` from (within) the `main` function in a **C** program.