Lab 1 Questions

1. The os\_maxtaskrun global variable has the array length information for os\_active\_TCB.
2. The os\_active\_TCB is an array of active task pointers.
3. The os\_idle\_TCB global variable has the os idle task TCB information.
4. No, the TCB of the os idle task is not an element in the os\_active\_TCB because they are not considered to be active tasks.
5. The index of a non-idle task with a task ID of n is (n - 1) in the os\_active\_TCB array.
   1. The p\_lnk variable is the link pointer for ready/sem. waitlist
   2. The tsk\_stack variable holds the current task stack pointer (i.e. the top of the stack).  
      The stack variable is a pointer to the beginning of task stack memory block.
   3. Yes, since both the OS\_XCB and OS\_TCB structs have a p\_lnk field.
6. The mp\_tcb variable is the memory pool for TCB allocation.   
   The mp\_stk variable is the memory pool for system stack allocation.
   1. The registers R0 - R15 are saved on the task stack
   2. The least significant 8 bits of the os\_stackinfo global variable contains the default stack size.
   3. The address of the first item pushed onto the task stack can be accessed by p\_TCB->stack[size-1].
   4. For a task that is not running, the address of the top of the stack is accessed through p\_TCB->tsk\_stack.
   5. For a task that is running, the address for the last item pushed onto the task stack is accessed through the rt\_get\_PSP() method.