Csc 332          Fall 2018       HW2 (Remzi ch 4,5) Due: Wed Oct 10

Tip: Don’t do any internet or library search. It is more beneficial to focus on the textbook and do your own thinking.  
  
Q1. Explain the purpose of UNUSED in proc\_state. When will a process be in this state?  
  
Q2. What information In Fig. 4.5 tells us that the memory allocation for a process is contiguous in physical memory, i.e., the process is not broken in pieces?  
  
Q3. In Fig 5.2, make the following changes:  
--at line 5, add the statement: int counter = 0;  
--In between lines 10 and 11, add the statement: counter++;  
--delete all the print statements from the program  
--Then add a statement between lines 20 and 21 that prints the value of the counter  
What are all the possibilities regarding total output produced by this program in any run? (Keep in mind what happened in Fig 2.5.)  
  
Q4. In ch 5, fig. 5.3:  
                In line 23, delete “else {“  and  
                Delete the line 27 (i.e., “}”)  
        Will the new code have the same outputs as before?  
  
Q5. In ch 5, fig 5.4, delete the line 16 (i.e., “close…”). How will this affect the Outputs produced by the program?  
  
Q6. In figure 5.4, line 11: when fork is executed, suppose the OS does not copy the image of the parent process into the child process yet, because it knows that soon this image will be replaced by the call to execvp in line 24. Instead, it creates everything else about the child process (e.g., pid value, process control block, etc.). Later, when execvp is called, it makes the child’s image in memory as usual.  
This way, we are saving the time in copying the image of parent process into the child process.  
Will this work? Explain.