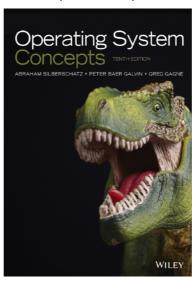
Assignment 2

Please complete a report.

The documents to be submitted for this assignment are:

- report.pdf
- 1. **[20 pts]** Read Chapter 2 of "Three Easy Pieces" (https://pages.cs.wisc.edu/~remzi/OSTEP/intro.pdf). Answer the following questions:
 - (1) What are the "three easy pieces" of operating systems? Explain each of them with your own words.
 - (2) How do these "three easy pieces" map to the chapters in the "dinosaur book"?



- 2. **[20 pts]** Read Chapter 6 of "Three Easy Pieces" (https://pages.cs.wisc.edu/~remzi/OSTEP/cpu
 -mechanisms.pdf) and explain what happens during **context switch** in detail?
- 3. [20 pts] Read slides "L03 Processes" and answer the following questions:
 - (1) Explain what happens when the kernel handles the fork() system call (hint: your answer should include the system call mechanism, PCB, address space, CPU scheduler, context switch, return values of the system call).
 - (2) Explain what happens when the kernel handles the exit() system call (hint: your answer should include discussion on the zombie state and how it is related to the wait() system call).
- 4. **[20 pts]** What are the three methods of transferring the control of the CPU from a user process to OS kernel? Compare them in detail.
- 5. **[20 pts]** Describe the life cycle of a process (hint: explain the reasons for process state transitions).