The University of the West Indies, St. Augustine
INFO2603 Platform Technologies 1
Semester 1, 2018/2019

Work Sheet #2

Operating Systems Concepts and Applications

1. What are two main functions of an operating system?
2. What is the difference between kernel mode and user mode?
3. Instructions related to accessing I/O devices are typically privileged instructions, that is, they can be executed in kernel mode but not in user mode. Citing an example for a business scenario, give a reason why these instructions are privileged.
4. Describe two tasks that are performed by an operating system.
5. Describe the four layers of interaction in an operating system model.
6. Draw a simple diagram to show the two modes of operations of an OS.
7. Briefly describe the function of the Command Line Interpreter.
8. Describe the purpose of the Process Table.
9. For each of the following nine types of operating systems, describe ONE business application and cite one example of an operating system that can be used to support that application domain. (Research required).
    i. Mainframe operating systems
    ii. Server operating systems
    iii. Multiprocessor operating systems
    iv. Personal computer operating systems
    v. Handheld operating systems
    vi. Embedded operating systems
    vii. Sensor node operating systems
    viii. Real-time operating systems
    ix. Smart card operating systems
10. List any 5 responsibilities of the File Manager.
11. Name the 3 common Data Storage Strategies. Briefly describe how they work.
12. In what ways are NTFS more reliable than FAT32 file system?
13. How does NTFS handle space efficiency?
14. List all security features provided by NTFS.