**CS2020 FALL Assignment 2**

**Due Date: September 18, 2020**

For the following questions, some answers can be found in the lecture notes. Some questions will be discussed in the lectures. If you are unable to attend the lectures due to Covid-19 quarantine, you should ask your fellow classmate for the information delivered in the lectures.

1. In the nineteenth century, a mechanical computer was designed by Charles Babbage and later built by Henry Babbage. What is the use of this machine?
2. State the names of the two earliest conceptual models for the modern computers.
3. State the names of the scientists who proposed the above conceptual models.
4. A computer is made of numerous logic gates. ENIAC is one of the earliest computer in the world. How many logic gates (in order of magnitude) it has?
5. For a modern computer with Intel Core i7 CPU, how many logic gates (in order of magnitude) it has?
6. State the years when the vacuum tube, the semiconductor transistor and the microprocessor were developed?
7. What invention led US possible to launch Apollo project and land a module on moon?
8. What are the five major hardware components in a computer?
9. What is the difference between a CPU and a GPU?
10. State three families of operating systems that you can find in computers.
11. State three operating systems that you can find in smartphone phones, like iPhone and HTC phones.
12. In term of controlling an operating system, the fifth generation computers were based entirely on text-command. Later, in the sixth and seventh generation computers, two more technologies are added. What are they? In which years, they were introduced?
13. A computer has been used as a part of an information system. State the definition of an information system in accordance with Laudon & Laudon.
14. If the WiFi option in your smartphone has been OFF, can you use your smartphone to access the course homepage?
15. If the WiFi option is ON and there is no WiFi access point around, can you use your smartphone to access the course homepage?