

## CSCI 315 Operating Systems Design

### Activity 3

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**Work with one or two partners.** Discuss the answers that each of you have produced for the questions below and write them on the back of this page.

Consider the reading you completed for today's class: *How Computers Boot Up*, by Gustavo Duarte. You have 25 minutes to seek answers to the following questions:

- a) What is the status of the RAM when you boot up a computer system?
- b) Where is the OS code when the machine is powered down?
- c) What is the first program that runs when a system is powered up?
- d) What is the purpose of the Power-on Self Test POST code?
- e) How is the system able to start running the code that will boot up the OS?
- f) What is the relationship between BIOS and the OS?
- g) How does the system find in which of possibly many mass storage devices the OS is stored?
- h) Why do disk drives have a *Master Boot Record* and also a *boot sector*?
- i) Assume that a computer system has just been powered up. Enumerate all the steps in boot sequence that happen *before* the first user process can start to execute.

Supplemental reading: <http://computer.howstuffworks.com/operating-system.htm>