Problem-solving is central to computer science and computer programming. Imagine the basic problem of trying to locate a single name in a phone book. How might we go about this? One approach could be to simply read from page one to the next to the next until reaching the last page. Another approach could be to search two pages at a time. A final and perhaps better approach could be to go to the middle of the phone book and ask, “Is the name I am looking for to the left or to the right?” Then, repeat this process, cutting the problem in half and half and half. Each of these approaches could be called algorithms. The speed of each of these algorithms can be called Big O notation.