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$-\frac{1}{3}$

0. Assuming you use binary search, what is the largest number of pages you have to look at in order to look up a word in an alphabetical dictionary with 1,000 pages? With 1,000,000 pages? With 1,000,000,000 pages?

· 10   · 20   · 25

Graded by:
Brendan
Hendricks

$\frac{6.77}{10}$

1. How many numbers can YOUR computer (the one you use to do your homework) add up in one millisecond (1/1000 second)? If you don't remember the exact speed of your computer, take a guess.

· 1000

2. Using ui.getInfo(prompt) and ui.sendMessage(message), write code that gets a name from the user and sends a message "Hello [name]" (say hello to the name) or "Blank names are not allowed" if the user gives you a blank name or does nothing if the user clicks CANCEL.

```
String name;

name = ui.getInfo("Type name");
    if (name.length() = 0) {
        ui.sendmessage("Blank names are not allowed");
        break;
    }
    if (name == null) {
        break;
    }
    ui.sendMessage("Hello" + name)
```

3. If a class implements an interface, does it need to have a public method with the same name and parameters for EVERY method in the interface? Can the class have methods OTHER than those in the interface it implements? (Hint: ArrayBasedPD.)

· Yes.
· It also can have other methods than those in the interface

4. If name1="Victor and name2="Vincent", then name1.compareTo(name2) is -11 because 'c' comes 11 letters before 'n'. What is it if name1="Jean" and name2="Jane"?

4

−1.33

You are testing your homework, but you have not implemented SortedPD find yet, so the directory will not yet be in alphabetical order. You look at the contents of theDirectory and size using the debugger. What you see is below. Show the result of a single operation described in 5, 6, 7, or 8. Each question is INDEPENDENT and refers to the ORIGINAL theDirectory and size below. Each time pretend that is the ONLY OPERATION you do.

theDirectory: Jay 1, Bob 8, Ian 2, Ann 3, Eve 6, null, null
size: 5

5. Result of ArrayBasedPD.remove(1). (Remember, [1] is Bob!!)

theDirectory: Jay 1 , Eve 6 , Ian 2 , Ann 3, null , null

size: 4

6. Result of SortedPD.remove(1).

theDirectory: Ann 1 , Eve 6 , Ian 2, Jay 1 , null , null

size: 4

7. Result of ArrayBasedPD.add(1, new DirectoryEntry("Zoe", 7)).
   (Only change two locations!)

theDirectory: Jay 1, Zoe 7, Ian 2, Ann 3, Eve 6, Bob 8, null

size: 6

8. Result of SortedPD.add(1, new DirectoryEntry("Zoe", 7)).

theDirectory: Ann 1 , Bob 8, Eve 6 , Ian 2, Jay 1 , Zoe 7, null

size: 6

9. Results of ArrayBasedPD.found(2, "Hal") and SortedPD.found(2, "Hal").
   True or false? Two answers.

   • False

   • False