| | | | | | | | | Andrew | / Id: | | | | |
|--------|--------------------------------|----------|----------|----------|--------------|----------|----------|-----------|----------|--------|----------|----------|------|
| | Un to f | 04 minu | tes. No | 1 | 5-121 | Fall 20 | 19 Qui | z 11 | nnutora | Show | vour wo | .ple1 | |
| D!man | | 24 mmu | tes. No | carcurat | ors, no | notes, n | io books | я, по сог | nputers | . Show | your wo | rk! | |
| | ry Heap der the fo | ollowing | array re | epresent | ation of | a binar | ry heap: | | | | | | |
| | | 1 | Τ | | | | | | | | | | |
| | 98 | 55 | 51 | 34 | 53 | 37 | 43 | 10 | 31 | 17 | 30 | | |
| (a) (| 4 points) | Draw t | he heap | represe | nted by | this ar | ray. | | | | | | |
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| (1) | | | | | | | | | | | | | |
| (b) (| 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | ooxes be | low. |
| (b) (a | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | ooxes be | low. |
| (b) (: | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | ooxes be | low. |
| (b) (a | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | poxes be | low. |
| (b) (i | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | poxes be | low. |
| (b) (a | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | poxes be | low |
| (b) (: | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | poxes be | low |
| (b) (: | 3 points) | Give th | ne array | after ac | lding 52 | 2 to the | heap. V | Vrite yo | ur final | answer | in the b | poxes be | low. |
| | | | | | | | | | | | | | |
| (c) (i | 3 points) 3 points) Write your | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |
| (c) (i | 3 points) | Buildir | ng on yo | ur answe | er from | part b, | | | | | | | |

2. (10 points) Code Tracing

Determine the output of the following program. Write your answer, and nothing else, in the box below the code.

```
public class Quiz11CT {
    TreeMap<String, Integer> a = new TreeMap<String, Integer>();
    public Quiz11CT(String s) {
        String[] b = s.split(" ");
        for (String c : b) {
            if (!a.containsKey(c)) {
                a.put(c, 0);
            }
            int val = a.get(c);
            val += c.length();
            a.put(c, val);
            System.out.println(c + ";" + val);
        }
    }
    public void output() {
        Set<String> d = a.keySet();
        for (String e : d) {
            System.out.println(e + "->" + a.get(e));
        }
    }
    public static void main(String[] args) {
        Quiz11CT quiz11 = new Quiz11CT("bear cat lion tiger monkey lion cat bear lion");
        System.out.println("---");
        quiz11.output();
    }
}
```