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1 *****
2 * PROGRAMMED BY : Nick Reardon
3 * CLASS          : CS1D
4 * SECTION        : MW - 2:30p
5 * Assignment #8 : Skip Lists
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7
8             Assignment #8 - Skip Lists
9
10
11     Develop software to implement a dictionary using a skip list.
12     Identify the output of pseudo random number generator that was
13     used (true or false). Test all dictionary methods.
14
15     After inputting the data
16     - Output each level of the skip list
17     - Output the dictionary keys and values
18
19     Use the following data to test your dictionary (same data as
20     Assignment 7).
21
22     Use the following input:
23         18 San Clemente
24         41 Mission Viejo
25         22 Laguna Niguel
26         44 Irvine
27
28     Delete key 18
29
30         58 Lake Forest
31         32 San Diego
32         49 Anaheim
33
34     Delete key 58
35
36         31 Los Angeles
37         17 Orange
38         72 Palms Springs
39         41 Riverside
40
41     Delete key 49
42
43         19 Brea
44         60 Santa Ana
45         35 Tustin
46         103 Oceanside
47         11 La Jolla
48         18 Del Mar
49         22 Aliso Viejo
50         49 Laguna Beach
51
52     Delete key 41
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53
54     42 Vista
55     49 San Diego
56     99 San Juan
57     29 Dana Point
58     88 El Segundo
59     41 San Clemente
60     62 Laguna Hills
61
62
63 Due March 25th.
64 *****
65
66 Inserting: 18, 41, 22, 44
67 Erasing 18
68 Inserting: 58, 32, 49
69 Erasing 58
70 Inserting: 31, 17, 72, 41
71 Erasing 49
72 Inserting: 19, 60, 35, 103, 11, 18, 22, 49
73 Erasing 41
74 Inserting: 42, 49, 99, 29, 88, 41, 62
75
76 -----
77 value: La Jolla           key: 11           level: 7           [[]][[]][[]][[]]
78 value: Orange            key: 17           level: 1           []
79 value: Del Mar           key: 18           level: 1           []
80 value: Brea              key: 19           level: 4           [[]][[]]
81 value: Aliso Viejo       key: 22           level: 7           [[]][[]][[]][[]]
82 value: Laguna Niguel     key: 22           level: 3           [[]][[]]
83 value: Dana Point       key: 29           level: 5           [[]][[]][[]]
84 value: Los Angeles      key: 31           level: 1           []
85 value: San Diego        key: 32           level: 1           []
86 value: Tustin           key: 35           level: 2           [[]]
87 value: San Clemente     key: 41           level: 1           []
88 value: Mission Viejo    key: 41           level: 1           []
89 value: Vista            key: 42           level: 2           [[]]
90 value: Irvine           key: 44           level: 1           []
91 value: San Diego        key: 49           level: 6           [[]][[]][[]][[]]
92 value: Laguna Beach     key: 49           level: 1           []
93 value: Santa Ana        key: 60           level: 2           [[]]
94 value: Laguna Hills     key: 62           level: 6           [[]][[]][[]][[]]
95 value: Palms Springs    key: 72           level: 2           [[]]
96 value: El Segundo       key: 88           level: 1           []
97 value: San Juan         key: 99           level: 2           [[]]
98 value: Oceanside        key: 103          level: 2           [[]]
99
100 -----
101
102 -----
103 level: 15
104 level: 14

```

```
105 level: 13
106 level: 12
107 level: 11
108 level: 10
109 level: 9
110 level: 8
111 level: 7
112 level: 6
113     value: La Jolla           key: 11
114     value: Aliso Viejo        key: 22
115 level: 5
116     value: La Jolla           key: 11
117     value: Aliso Viejo        key: 22
118     value: San Diego          key: 49
119     value: Laguna Hills       key: 62
120 level: 4
121     value: La Jolla           key: 11
122     value: Aliso Viejo        key: 22
123     value: Dana Point         key: 29
124     value: San Diego          key: 49
125     value: Laguna Hills       key: 62
126 level: 3
127     value: La Jolla           key: 11
128     value: Brea               key: 19
129     value: Aliso Viejo        key: 22
130     value: Dana Point         key: 29
131     value: San Diego          key: 49
132     value: Laguna Hills       key: 62
133 level: 2
134     value: La Jolla           key: 11
135     value: Brea               key: 19
136     value: Aliso Viejo        key: 22
137     value: Laguna Niguel      key: 22
138     value: Dana Point         key: 29
139     value: San Diego          key: 49
140     value: Laguna Hills       key: 62
141 level: 1
142     value: La Jolla           key: 11
143     value: Brea               key: 19
144     value: Aliso Viejo        key: 22
145     value: Laguna Niguel      key: 22
146     value: Dana Point         key: 29
147     value: Tustin             key: 35
148     value: Vista              key: 42
149     value: San Diego          key: 49
150     value: Santa Ana          key: 60
151     value: Laguna Hills       key: 62
152     value: Palms Springs      key: 72
153     value: San Juan           key: 99
154     value: Oceanside          key: 103
155 level: 0
156     value: La Jolla           key: 11
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157	value: Orange	key: 17
158	value: Del Mar	key: 18
159	value: Brea	key: 19
160	value: Aliso Viejo	key: 22
161	value: Laguna Niguel	key: 22
162	value: Dana Point	key: 29
163	value: Los Angeles	key: 31
164	value: San Diego	key: 32
165	value: Tustin	key: 35
166	value: San Clemente	key: 41
167	value: Mission Viejo	key: 41
168	value: Vista	key: 42
169	value: Irvine	key: 44
170	value: San Diego	key: 49
171	value: Laguna Beach	key: 49
172	value: Santa Ana	key: 60
173	value: Laguna Hills	key: 62
174	value: Palms Springs	key: 72
175	value: El Segundo	key: 88
176	value: San Juan	key: 99
177	value: Oceanside	key: 103

178

179 -----

180 Find value by key 41

181 Resulting value: San Clemente

182

183 Calling size() method

184 Resulting value: 22

185

186 Press any key to continue . . .