

```
1  #Program Name: Lab 6 - Dictionary
2  #Program Description: This program will create a dictionary and find the dictionary,
3  #then print out the found results from the dictionary
4
5  # write the program to do the following :
6  # 1: Course, name, and lab
7  # 2: Current time
8  # 3: create_my_contact()
9  # 4: save_json_file(fileName, contact_list)
10 # 5: find_my_contact_key(searchKey, my_contact)
11 # 6: test dricer code
12
13 #@Author: Kuan-Hua Fu
14 #@Date : 2022/04/17
15
16 # Import Module
17 import json
18 from datetime import datetime
19
```

```

20 # create_my_contact()
21 def create_my_contact():
22     dic = {"01": {"firstname" : "John", \
23                 "lastname": "Smith", \
24                 "DOB" : "1/20/1991", \
25                 "phoneNum": { \
26                     "home" : "5100-600-5400", \
27                     "cell" : "510-873-2543" \
28                 }, \
29                 "address": { \
30                     "street" : "100 main street", \
31                     "city": "Fremont", \
32                     "state" : "CA", \
33                     "zipcode" : "94536" \
34                 }, \
35             }, \
36             "02": {"firstname": "Ron", \
37                   "lastname" : "Robertson", \
38                   "DOB" : "5/23/1991", \
39                   "phoneNum": { \
40                       "home" : "510-600-8800", \
41                       "cell" : "925-983-5487" \
42                   }, \
43                   "address": { \
44                       "street" : "4600 Ohlone Way", \
45                       "city": "Fremont", \
46                       "state" : "CA", \
47                       "zipcode" : "94539" \
48                   }, \
49             }, \
50             "03": {"firstname": "Paul", \
51                   "lastname": "Washington", \
52                   "DOB" : "6/15/1995", \
53                   "phoneNum": { \
54                       "home" : "510-688-1241", \
55                       "cell" : "408-489-8905" \
56                   }, \
57                   "address": { \
58                       "street" : "8543 Ohlone Plaza", \
59                       "city": "Fremont", \
60                       "state" : "CA", \
61                       "zipcode" : "94539" \
62                   }, \
63             }, \
64         }
65
66     return dic
67

```

```

68 # save_json_file(filename, contact_list)
69 def save_json_file(filename, data):
70     with open( filename, "w") as outputfile:
71         json.dump( data, outputfile)
72
73 def open_json_file( filename ):
74
75     file = open( filename, 'r' )
76     return file
77
78 # find_my_contact_key(searchKey, my_contact)
79 def find_my_contact_key( first_name, data ):
80     json = json.load( data )
81     first_name_found = False
82     print(f"*** Searching for {first_name}" )
83     for id, nested_dict in json.items():
84         if nested_dict['firstname']==first_name:
85             first_name_found = True
86             print( f"*** {first_name} found ***" )
87             print("Name:".ljust(9), f"{nested_dict['firstname']} {nested_dict['lastname']}" )
88             print("Birthday:".ljust(9), f"{nested_dict['DOB']}" )
89             print("cell:".ljust(9), f"{nested_dict['phoneNum']['home']}" )
90             print("Address:".ljust(9), f"{nested_dict['address']['street']}\n\t {nested_dict['address']['city']} , {nested_dict['address']['state']} {nested_dict['address']['zipcode']}" )
91             print("\n")
92             json = None
93             return
94
95     if not first_name_found:
96         print(f"*** {first_name} not found *** ")
97

```

```

98 # test dricer code
99 if __name__ == '__main__':
100
101     # Course, name, and lab
102     name = "Kuan-Hua Fu - CNET 142 - Lab 6 Dictionary"
103     print ( "{:16}".format("Name"), ': ', name)
104
105     lab = "dictionary.py"
106     print ( "{:16}".format("Program"), ': ', lab)
107     # Current time
108     currentTime = datetime.now()
109     TimestampStr = currentTime.strftime("%b-%d-%Y %a (%I:%M:%S%p)")
110     print("{:16}".format("Current Time"), ': ', TimestampStr)
111
112     contact_list = create_my_contact()
113     save_json_file("my_contact.json" , contact_list )
114
115     json_data = open_json_file( "my_contact.json" )
116
117     print("***BEGINING OF JSON List: \n", contact_list, \
118         "\n***END OF JSON LIST\n\n")
119
120     find_my_contact_key("Ron", json_data)
121
122     json_data = open_json_file( "my_contact.json" )
123
124     find_my_contact_key("Sha", json_data)

```

JSON file

Lab6 > {} my_contact.json > ...

```
1  {"01": {"firstname": "John",
2      "lastname": "Smith",
3      "DOB" : "1/20/1991",
4      "phoneNum": {
5          "home" : "5100-600-5400",
6          "cell" : "510-873-2543"
7      },
8      "address": {
9          "street" : "100 main street",
10         "city": "Fremont",
11         "state": "CA",
12         "zipcode": "94536"
13     }
14 },
15 "02": {
16     "firstname": "Ron",
17     "lastname": "Robertson",
18     "DOB" : "5/23/1991",
19     "phoneNum": {
20         "home" : "510-600-8800",
21         "cell" : "925-983-5487"
22     },
23     "address": {
24         "street" : "4600 Ohlone Way",
25         "city": "Fremont",
26         "state": "CA",
27         "zipcode": "94539"
28     }
29 },
30 "03": {
31     "firstname": "Paul",
32     "lastname": "Washington",
33     "DOB" : "6/15/1995",
34     "phoneNum": {
35         "home" : "510-688-1241",
36         "cell" : "408-489-8905"
37     },
38     "address": {
39         "street" : "8543 Ohlone Plaza",
40         "city": "Fremont",
41         "state": "CA",
42         "zipcode": "94539"
43     }
44 }
45 }
```

Output

```
Name           : Kuan-Hua Fu - CNET 142 - Lab 6 Dictionary
Program        : dictionary.py
Current Time    : Apr-24-2022 Sun (01:19:08AM)
***BEGINING OF JSON List:
{'01': {'firstname': 'John', 'lastname': 'Smith', 'DOB': '1/20/1991', 'phoneNum': {'home': '5100-600-5400', 'cell': '510-873-2543'}, 'address': {'street': '100 main street', 'city': 'Fremont', 'state': 'CA', 'zipcode': '94536'}}, '02': {'firstname': 'Ron', 'lastname': 'Robertson', 'DOB': '5/23/1991', 'phoneNum': {'home': '510-600-8800', 'cell': '925-983-5487'}, 'address': {'street': '4600 Ohlone Way', 'city': 'Fremont', 'state': 'CA', 'zipcode': '94539'}}, '03': {'firstname': 'Paul', 'lastname': 'Washington', 'DOB': '6/15/1995', 'phoneNum': {'home': '510-688-1241', 'cell': '408-489-8905'}, 'address': {'street': '8543 Ohlone Plaza', 'city': 'Fremont', 'state': 'CA', 'zipcode': '94539'}}}
***END OF JSON LIST

*** Searching for Ron
*** Ron found ***
Name:      Ron Robertson
Birthday:  5/23/1991
cell:      510-600-8800
Address:    4600 Ohlone Way
           Fremont , CA 94539

*** Searching for Sha
*** Sha not found ****
```