Dictionaries

1. Consider the following dictionary:

```
color_code = {'red':   '#FF0000',
              'green': '#00FF00',
              'blue':  '#0000FF'}
```

What will be printed for the following expressions? If an expression generates an error write “error”.

Expression	Value
`color_code['red']`	
`color_code['black']`	
`color_code['#00FF00']`	
`color_code[2]`	

2. Consider the following dictionary:

```
person = {}
person['name'] = 'Adalbert Gerald Soosai Raj'
person['age'] = 30
person['isAlive'] = True
person['phone'] = [
  {'type': 'office', 'number': '608-123-4567'},
  {'type': 'home', 'number': '608-987-6543'}
]
person['address'] = {'street': '1210 West Dayton Street',
'city': 'Madison', 'state': 'WI', 'zip': 53706}
```

What is the **type** (int, float, bool, str, list, dict) of the following expressions?

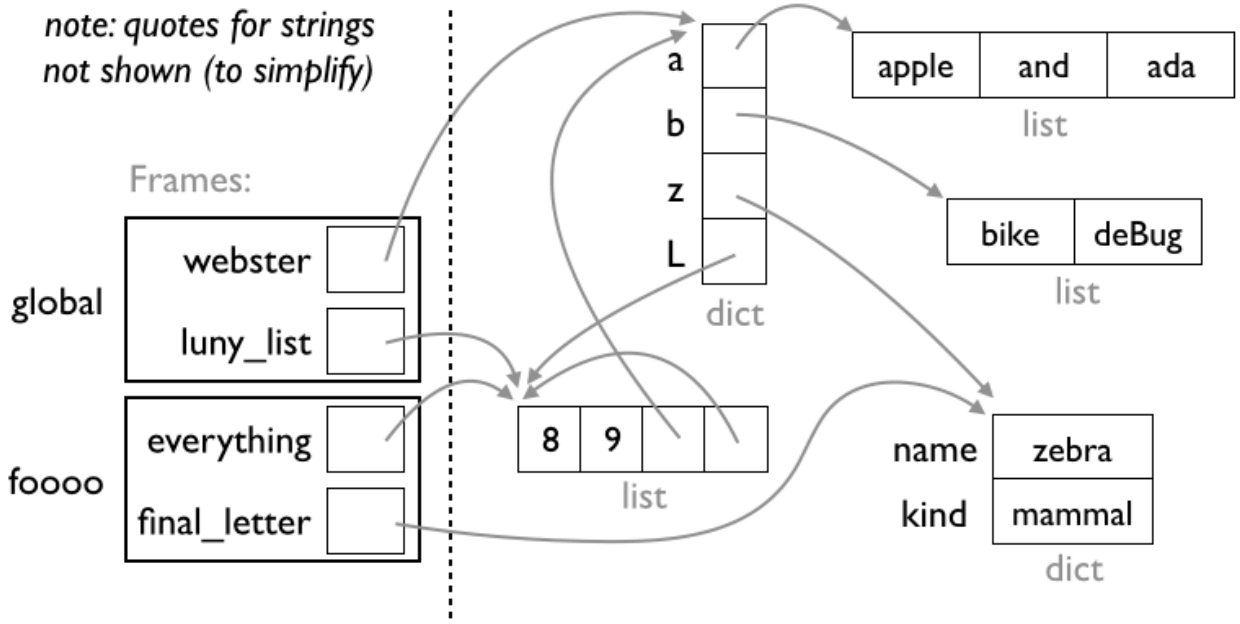
Expression	Type	Expression	Type
`person`		`person['isAlive']`	
`person['name']`		`person['phone']`	
`person['age']`		`person['address']`	

3. For this wacky code, what is printed if we replace **????** in each case (use diagram)?

```
webster = {
    "a": ["apple", "and", "ada"],
    "b": ["bike", "deBug"],
    "z": {"name": "zebra", "kind": "mammal"}
}
luny_list = [8, 9, webster]
luny_list.append(luny_list) # what?????
webster["L"] = luny_list

def foooo(everything):
    final_letter = everything[2]["z"]
    print(????)

foooo(luny_list)
```



????	**result**	**????**	**result**
luny_list[1]		luny_list[3][1]	
webster["a"][-1]		everything[3][3][3][2]["z"]["kind"]	
webster["z"]["name"]		final_letter["name"][-1]	
webster["L"][1]		luny_list[3][-1][3][-1][3][-1][3][-1][0]	
luny_list[2]["b"][1]		webster["L"][2]["L"][2]["L"][2]["L"][1]	

4. What is the output of the following code snippet?

```
capitals = {'India': 'New Delhi',
            'USA':   'Washington DC',
            'China': 'Beijing'}

for item in capitals:
   print(item)
```

5. What is the output of the following code snippet?

```
word = "Happiness"
d = dict()
for letter in word:
   if letter in d:
       d[letter] += 1
   else:
       d[letter] = 1
print(d)
```

6. Consider the following dictionary:

```
d = {}
d[0] = 'zero'
d[1] = 'one'
d[2] = 'two'
```

What will be printed for the following expressions? If an expression generates an error write “error”.

Expression	Value
`1 in d`	
`'2' in d`	
`2 not in d`	
`'zero' in d`	