

Lab 3.5 Dict

Types

1. look at this code and answer the questions below, answers at the end of the lab sheet

```
numberOfQuestions = 5
averageAge = 23.4
debugMode = True
name = "joe"
ages = []
months = ('Jan', 'Feb', 'Mar')
book = {}
stuff = [ 12 , 'Fred', False, {}]
someone = dict(firstname = "joe")
me = {
    "firstName" : "Andrew",
    "teaching" : [{
        "courseName" : "programming",
        "semester" : 1
    }, {
        "courseName" : "Data Representation",
        "semester" : 2
    }
    ]
}
```

What are the variable types of the following variables in the code above

- (a) numberOfQuestions
 - (b) averageAge
 - (c) debugMode
 - (d) name
 - (e) ages
 - (f) months
 - (g) months[1]
 - (h) book
 - (i) stuff
 - (j) stuff[2]
 - (k) someone
 - (l) someone["firstname"]
 - (m) me
 - (n) me["teaching"]
 - (o) me["teaching"][0]["semester"]
- p is a trick question look at it carefully
- (p) me["teaching"][0]["coursename"]

2. Write a program that stores a student name and a list of her courses and grades in a dict, the program should then print out her data.
The number of course she has could change.
We can hard code the values in this dict for this example

Student: Mary
Programming : 45
History : 99

Answer

```
student = {
    "name": "Mary",
    "modules": [
        {
            "courseName": "Programming",
            "grade": 45
        },
        {
            "courseName": "History",
            "grade": 99
        }
    ]
}
print ("Student: {}".format(student["name"]))
for module in student["modules"]:
    print("\t {} \t: {}".format(module["courseName"], module["grade"]))
```

Extra (I don't give the answer to)

Do the problem sheet assignment

Answers to Question 1

- a. int
- b. float
- c. boolean
- d. str
- e. array
- f. tuple
- g. str
- h. dict
- i. array
- j. boolean (False)
- k. dict
- l. str
- m. dict
- n. array (is is nested in the dict)
- o. int
- p. undefined (the code has a capital N in courseName)