University of Mohamed Khider
Faculty of Economics, Business and Management Sciences
Subject: Fundamentals of Programming with Python
Level: First Year – Common Core

Exercise 1

Write a Python program that performs the following tasks:

1. Create a dictionary called book with the following information:
    - "title" → "Conditions of Renaissance"
    - "author" → "Malek Bennabi"
    - "year" → 1937
    - "pages" → 250
2. Print the book's title.
3. Change the year to 1938.
4. Add a new key "publisher" with value "Dar Al-Shorouk".
5. Check if the key "isbn" exists. If not, print "ISBN not found".
6. Print all keys of the dictionary.
7. Print all values of the dictionary.
8. Print the number of items in the dictionary.
9. Remove the key "pages".
10. Create a copy of the dictionary into a new variable called new_book.
11. Print the final dictionary.

Exercise 2

Write a Python program that performs the following tasks:

1. Create a nested dictionary called students with this data:

```
students = {
   "student1": {"name": "Ali", "age": 20, "major": "Economics", "math": 14, "statistics": 15},
   "student2": {"name": "Sara", "age": 22, "major": "Business", "math": 17, "statistics": 16}
}
```

2. Print the name of student1.
3. Update the math grade of student1 to 18.

4. Print all student names using a loop.
5. Calculate and print the average math grade of all students.
6. Check if "student3" exists in the dictionary.
7. Print the final dictionary.