

Assignment # 2

Q1 (Weight 30%): Write a python program that:

- Reads the number of rows and columns from the user.
- Reads the different elements of the matrix from the user.
- Calls a function to displays the matrix.
- Calls a function to return the sum of all elements in the matrix.

The quality of the code is important. Your code must have meaningful variable names, correct indentation, and documentation of the code.

Your code must only be based on concepts discussed in class. Otherwise, points will be taken off.

Q2 (Weight 70%): The following table stores the grades of courses for several students. For instance:

	Ali	Mohammad	Saed	John	Mike
SWE225	90	60	50	77	45
SWE371	89	76	90	65	98
SWE346	10	90	86	67	93
SWE245	59	70	100	90	80

Use a dictionary to store the information in the table, and write functions that do these things:

1. Add a student to the table.
2. Delete a student from a table.
3. Delete a course from a table.
4. Add a course to the table.
5. Add a grade for a course for a certain student. For instance, the function may add a grade (80) for a certain course (SWE225) for a student (Saed).
6. Update a grade for a course for a certain student.
7. Find the grade of a course for a student.
8. Calculate the average of all course grades for a certain student.
9. Calculate the average of all student grades for a certain course.
10. The name of the student who achieved the highest grade in a course.
11. The names of students who failed a course (failure is a grade below 60).

The quality of the code is important. Your code must have meaningful variable names, correct indentation, and documentation of the code.

Your code must only be based on concepts discussed in class. Otherwise, points will be taken off.

Submission

Please submit your answer in a word file. The solutions will be submitted to SafeAssign, a plagiarism tool.