QUESTIONS

Assume that you are given the structure below

typedef struct StudentMark {

char name[20];

char surname[20];

int midterm;

int final;

}STUDENT\_MARK;

1-) Write down a program which contains

a-) A **function** to get the user entered name, surname, and exam marks into **dynamically**

**allocated** STUDENT\_MARK structure (your function MUST check input validity i.e

entered marks must between [0..100]).

b-) A **function** to write down the entered VALID structures into a file named as

**marks\_YOUR\_STUDENT\_ID.txt.**In this filename **YOUR\_STUDENT\_ID** part will be

the programmer’s (i.e yours :) student ID.

2-) Write a program which contains

a-) A **function** to read a file named as **marks\_YOUR\_STUDENT\_ID.txt** which contains

STUDENT\_MARK structures’ data.

b-) A **function** to calculate the average of each student’s exam marks and **writes the result**

**onto screen as**

“The student NAME SURNAME’s midterm mark is MIDTERM, final mark is

FINAL and his/her average is AVERAGE”

NAME, SURNAME, MIDTERM, FINAL parts are the values read from file and the AVERAGE is

the value calculated according to the formula (midterm \* 0.4 + final \* 0.6).

3-) Write down an informal design document (as an MS Word file) to describe your program design,coding decisions/alternatives you preferred in details. For example, you should describe “Your file format design (i.e how you wrote the data into file), how you read data from file, how you allocated memory for the data, what you returned each function and why?” in details in addition to other decisions you made for the code. **Your decisions will also be the part of evaluation/marking!**designs and