Answer any 6 out of 7 questions. Each question carries 5 points.

1. Write a program to take input of m x n size where m, n and the matrix is given as user input. Then find the transpose of that matrix and print it. To find the definition of transpose matrix visit <https://en.wikipedia.org/wiki/Transpose>.
2. Write a function mystrcpy(char \*s1, char \*s2) that will return the copy s2 to s1. You are not allowed to use any string functions. 5
3. Write a program to find the maximum and minimum element from an array using recursion. 5
4. Write a program to take input of students (id, name, cgpa) until id is given zero and put those students in a linked list in sorted order. Use typedef to define the structure name as Student. 5
5. Write a function writeFile(Student \*ptr) that will save those students into a binary file called student.db that will be opened for writing in that same function. 5
6. Write a function readFile() that will open the student.db file created in question 5 and then print three students information in console output according to the following order: last student, the second last student and the third student. Use fseek () function to do the job. 5
7. Write a program to take input of 100 integers in a dynamically allocated array using malloc() function, then find the average of numbers that are in between 20 and 80. For example if an array contains [10, 40, 15, 20, 30, 90] then the average will be (40+20+30) / 3 = 30. 5