Program Set 10

Dates: 23.01.2023 – 27.01.2023

1. Write a program to sort in alphabetical order, a set of 5 names stored in a 2D string. Assume that each name starts with a different letter.
2. Create a structure to store data on students: Roll number, Name, Department, Course, Year of joining. Enter data for 5 students – use array of structures.
    a) Print names of all students who joined in a particular year.
    b) Print the data of a student whose roll number is given.
3. To store date use structure called **st_date,** that contains three members namely date (int), month (string of size 4 including NULL) and year (int).
    a. Use **typedef** to name this structure.
    b. Create two elements of this datatype.
    c. Write a program that compares two given dates. If the dates are equal then display message as "Equal" otherwise "Unequal".
4. Write a program to store identity card numbers – either adhaar card number (string of size 12) or passport number (string of size 10) using union. Create 3 elements of this union and ask users to choose id details they want to enter, and store them in these three elements. Compare all three elements. If any two are same, print “error”. Else print “thank you”.
5. Find the sum, mean, standard deviation of **n** numbers entered by user using dynamic memory allocation. Use malloc(), free() and include a check to see if enough memory is available for dynamic allocation.
6. Write a program to copy
    a. All the contents of an existing text file into a new text file.
    b. Only the lowercase characters of an existing text file into a new text file.
    c. Only the numeric characters of an existing text file into a new text file.
    d. All the contents of an existing file into a new file, and while copying, convert all the uppercase letters to lowercase and lowercase letters to uppercase.
7. Write a program to append the contents of an existing text file into another existing text file.
8. Try problem 1 with dynamic memory allocation, where number of names to be stored will be entered by user