Q10. Read at most 10 names of students and store them into an array of char nameOfStudents[10][50]. Sort the array and display them back. Hint: Use qsort() method.

#define MAX\_STUDENTS 10

#define MAX\_NAME\_LENGTH 50

// Comparison function to be used by qsort

int compareNames(const void \*a, const void \*b) {

return strcmp((char \*)a, (char \*)b);

}

int main() {

char nameOfStudents[MAX\_STUDENTS][MAX\_NAME\_LENGTH];

int n;

// Read the number of students

printf("Enter the number of students (max %d): ", MAX\_STUDENTS);

scanf("%d", &n);

// Check if the number of students is within the valid range

if (n > MAX\_STUDENTS || n <= 0) {

printf("Invalid number of students!\n");

return 1;

}

// Read the names of students

printf("Enter the names of the students:\n");

for (int i = 0; i < n; i++) {

printf("Student %d: ", i + 1);

scanf(" %[^\n]", nameOfStudents[i]);

}

// Sort the array using qsort

qsort(nameOfStudents, n, MAX\_NAME\_LENGTH, compareNames);

// Display the sorted names

printf("\nSorted list of student names:\n");

for (int i = 0; i < n; i++) {

printf("%s\n", nameOfStudents[i]);

}

return 0;

}