

Lab 10

Pointers in C

Marks: 5

Question 01:

Read an array through pointer and search for how many times a certain word has occurred in the given array.

Example:

Your word: is

Search in: your task is to display the number which is given by user.

Occurrence: 2 times

Question 02:

Write a program to find separately the sum of the even and odd indexed elements of an array of size 10. Pass the even and odd elements to separate functions eg: sumEvenIndex(int*), sumOddIndex(int*) to carry out its sum. Also pass this array to a function called sortArray(int[]) and display the array elements into ascending order using pointer.

Question 03:

A zoo in Madagascar wants to keep track of how many pounds of food each of its three Pandas eats each day during a typical week. Write a program that stores this information in a two dimensional 3×7 array, where each row represents a different Panda and each column represents a different day of the week. The program should first have the user input the data for each Panda. Then it should create a report that includes the following information:

- Average amount of food eaten per day by the whole family of Pandas.
- The least amount of food eaten during the week by any one Panda.
- The greatest amount of food eaten during the week by any one Panda.

Create three functions to perform these calculations and generate report in main (). All arguments to functions should pass by reference.

Question 04:

Write a single function that receives an array of 5 integers and returns the sum, average and standard deviation of these numbers without using return statement. Call this function from main() and print the results in main().

$$\sigma = \sqrt{\frac{\sum (x - \mu)^2}{N}}$$

Question 05:

Perform merge sort on following array by using pointers:

