**CSE 115 Lab on 1D Array – Ara2**

1. Following is a C program to search an element of an array:

#include<stdio.h>

int main() {

int ele, num, i;

printf("\nEnter no of elements :");

scanf("%d", &num);

int a[num];

printf("\nEnter the values :");

for (i = 0; i < num; i++) {

scanf("%d", &a[i]);

}

//Read the element to be searched

printf("\nEnter the elements to be searched :");

scanf("%d", &ele);

//Search starts from the zeroth index

for (i=0; i < num;i++) {

if(ele == a[i]){

printf("Number found at the index = %d", i);

break;

}

if (i == num) { //if i reached to num (i.e., loop ended) then number not found

printf("Number not found");

}

}

**Try yourself 1:** Modify the above code to print all the indexes/locations of a given number in a 100 element integer array.

**NOTE:**

A **string** is a char array which ends with a null character (‘ \0 ’).

That is, if a string is hello, then the array containing the string will be as follows:

h e l l o \0

**2. C program to find the indexes of an input character in a string and then print its frequency.**

1. #include <stdio.h>
2. #include <string.h>
4. void main()
5. {
6. char a, word[50];
7. int i, freq = 0, flag = 0;
8. printf("Enter character: ");
9. scanf("%c", &a);
10. printf("Now enter the word: ");
11. scanf("%s", word);
12. printf("Positions of '%c' in %s are: ", a, word);
13. for (i = 0; i < strlen(word); i++) {
14. if (word[i] == a)
15. {
16. flag = 1;
17. printf("%d ", i + 1);
18. freq++;
19. }
20. }
21. if (flag)
22. printf("**\n**Character '%c' occured for %d times.**\n**", a, freq);
23. else
24. printf("Given character was not found**\n**");
25. }

**Exercise.**

1. **Write a C program to read a 1000 element integer array from user and then prints the sum of positive numbers in it.**
2. **Write a C program to read a 1000 element integer array from user and then prints the minimum element in it.**

**Assignments:**

1. **Write a C program to read a string and then prints its reverse. E.g. if the input string is “Hello” your program should print “olleH”.**
2. [**Write a C program to count total number of vowels and consonants in a string**](http://www.codeforwin.in/2015/04/c-program-to-calculate-total-number-of-vowels-and-consonants.html)**.**
3. [**Write a C program to count total number of words in a string**](http://www.codeforwin.in/2015/04/c-program-to-calculate-total-number-of-words.html)**.**
4. [**Write a C program to check whether a string is palindrome (e.g. “madam”, “kayak”, “rotor”, “ala”, etc.) or not**](http://www.codeforwin.in/2015/04/c-program-to-check-palindrome.html)**.**
5. **Write C program to count the number of capital and small letters in an input string and print those numbers.**