

Assignment on Array, Strings

1. Write a program that searches for a given value (called a search key) in an array and prints the first and last index in which that value appears.
2. Write a program that prints ALL indexes in which the largest value of array is present.
3. Write a program that deletes all the elements in an array which match a search key.
4. Write a C program to print the 2nd largest & 2nd smallest elements of an array.
5. Write C program to check if an input string is a palindrome (e.g. “madam”, “dad”, etc.) or not.
6. Write a C program that reads a string, create a new string containing all the characters the input string except the vowels in it, and then prints the new string.
Sample input/output:
Enter a string: Hello how are you?
Output string: Hll hw r y?
7. Write a C program to print all unique letters in an input string.
Sample input/output:
Enter a string: Hello how are you?
Unique letters in the input string (ignoring differences between lowercase & uppercase letters):
a, e, h, l, o, r, u, w, y
8. Write a program that reads a string from user and then prints the number of times different letters appear in that string.
Sample input/output:
Enter a string: Hello how are you?
Frequencies of letters in the input string:
a/A: 1, e/E: 2, h/H: 2, l/L: 2, o/O: 3, r/R: 1, u/U: 1, w/W: 1, y/Y: 1,
9. Write a C program that deletes all duplicate letters from an input string.
10. Write a function that searches for a character in a string. The function should print true if found, otherwise print false.

```
void search(char arr[], char key);
```

Sample Output 1:

```
Enter String: bangladesh
Search Key: g
Found
```

Sample Output 2:

```
Enter String: bangladesh
Search Key: v
Not found
```

11. Write a function that returns the number of times a value appears in an array.

```
int countSearchKey(int arr[], int size, int key);
```

Sample Output 1:

```
Enter array size: 5
Array Elements: 7 3 4 8 1
Search Key: 4
Search Key appears 1 times
```

Sample Output 2:

```
Enter array size: 7
Array Elements: 2 3 2 9 2 10 6
Search Key: 2
Search Key appears 3 times
```