

Computer Project Questions(AY 21-22)

11) Write a program to accept a string and display:

- i) The number of lower case characters
- ii) The number of upper case characters
- iii) The number of special characters
- iv) The number of digits present in the string

12) Write a program to display the given pattern:

```
STUDENT
STUDEN
STUDE
STUD
STU
ST
S
ST
STU
STUD
STUDE
STUDEN
STUDENT
```

13) Write a program to input a string and convert it into uppercase and print the pair of vowels and number of pair of vowels occurring in the string.

Sample Input:

"BEAUTIFUL BEAUTIES "

Sample Output :

Pair of vowels: EA, AU, EA, AU, IE

No. of pair of vowels: 5

14) Write a program to accept a name and display the initials along with the surname.

Sample Input: Mohandas Karamchand Gandhi

Sample Output: M.K.Gandhi

15) Write a program to enter names and populations of n countries in an array and display the populations in descending order along with their names using the **Bubble Sort** technique.

16) Write a program to accept the year of graduation from school as an integer value from the user. Use the **Binary Search** technique on the sorted array of integers given below.

Print the message “Record exists” if the value input is located in the array.

If not, print the message “Record does not exist”.

{1992, 1997, 2003, 2006, 2009, 2013, 2016, 2017, 2019, 2020}

17) Write a program to accept 10 different numbers in a Single Dimensional Array (SDA). Now, enter a number and search whether the number is present or not in the list of array elements by using the “**Linear Search**” technique.

Sample:

n[0]	n[1]	n[2]	n[3]	n[4]	n[5]	n[6]	n[7]	n[8]	n[9]
73	56	62	77	46	67	59	80	45	26

Enter the number to be searched: 42

The number is not present in the array.

18) Write a program to accept 10 different numbers in a **Single Dimensional Array (SDA)**. Now, enter a number and **by using binary search technique**, check whether the number is present in the list of

array elements. If the number is present then display the message “Search successful” otherwise, display “Search unsuccessful”.

Sample Input:

n[0]	n[1]	n[2]	n[3]	n[4]	n[5]	n[6]	n[7]	n[8]	n[9]
43	45	92	87	64	76	81	65	12	31

Enter a number to be searched: 87

The search successful and the number is present.

19) Write a program to accept 20 integer numbers in a Single Dimensional Array. Find and display the following:

- i) Number of even numbers
- ii) Number of odd numbers
- iii) Number of multiples of 4

20) Write a program to store names of 5 states and their capitals in two different Single Dimensional Arrays. Now, enter the name of a state and search it in the given list of state names. If it is present then display its capital, otherwise display “State name is not enlisted”.

Sample Input: Enter the state and the capital

Bihar

Patna

West Bengalso on

Sample Output: Enter the state whose capital is to be searched:

West Bengal

The capital is Kolkata
