



School of Information Technology and Engineering

BCSE102P -Structured and Object-Oriented Programming Lab

Digital Assignment -I

1. Write a C Program to check occurrence of each digit in a given number using function with argument no return type.

Input:

1635953

output

The occurrence of 1 :1

The occurrence of 6 :1

The occurrence of 3:2

The occurrence of 5:2

The occurrence of 9:1

The occurrence of 3:1

2. Write a function in C to obtain the prime factors of a given n .

Input

35

Output

5 and 7

Input

24

output

2,2,2 and 3

3. Write a program in c to replace each element in an array by its rank.

Input array : 6, 3, 1, 9, 4, 5

Output : 5, 2, 1, 6, 3, 4

4. The body Mass index is defined as ratio of the weight of a person to the square of the height . Write a program in c that receives weight and height , calculate the BMI reports the BMI category as per the following table.

BMI CATEGORY	BMI
Starvation	<15
Anorexic	15.1 to 17.5
Underweight	17.6 to 18.5
ideal	18.6 to 24.9
Overweight	25 to 25.9
Obese	30 to 30.9
Morbidly Obese	>=40

5. Given an array a[] of integers, Write a C program to find the maximum difference between any two elements such that larger element appears after the smaller number.

Input : a[] = {2, 3, 10, 6, 4, 8, 1}

Output : 8

6. Program to print inverted right half pyramid pattern using star(*) in C

Input 5

Output:

```

* * * * *
 * * * *
  * * *
   * *
    *

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7.The information about color is stored in a character array called color. Each index value represents seven colors of rainbow i.e , 0 index represents 'v' , 1 represents 'i' and so on. Create another array color ASCII which stores the ascii value of an array color. Write a C program that asks input from user to enter number between 0 and 6 and based on this number it display color of the number as well as ASCII value .

Input:

Enter input value 4

Output

y

121

8.A Company planning to launch a new newspaper in market conducts a survey. The various parameters considered in the survey were, the economic status (upper,middle and lower class) the languages readers prefer (English,Hindhi,Regional Language) and category of paper (daily,supplement ,tabloid).Write a program which reads data of 10 respondents through keyboard, and stores the information in an array of integers.The bit wise information to be stored in an integer is given below.

Bit no	Information
0	Upper class
1	Middle class
2	Lower class

3	English
4	Hindi
5	Regional Language
6	Daily
7	Supplement
8	Tabloid

At the end give the statistical data for number of persons who read English daily, number of Upper class people who read Tabloid and number of Regional Language readers.

9. Write a program in C to remove characters(numbers,white space ,special characters) from a string except alphabets

Input :

w3resource123.com#

Output

wresourcecom

10. Write a program in C to find the largest and smallest words in a string

Input:

it is a general purpose programming language

output:

largest word: programming

smallest word : a