VIT - Vellore

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BCSE102P_VL2024250502365_ASSESSMENT_SET 3

BCSE102P_VL2024250502365_Assessment 2_Set 3

Attempt : 1
Total Mark : 20
Marks Obtained : 4.5

Section 1 : Coding

1. Problem Statement:

Jackson, a professional puzzle maker, is designing a special numerical lock system. He wants the lock to be based on the least common multiple (LCM) of digits extracted from even positions of a given number. To make the challenge unique, he increments each digit from even positions by 1 before calculating the LCM.

Help Jackson complete the lock design by determining the LCM of the modified digits.

Example:

Input:

123456

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Output:

12

Explanation:

Step 1: Read the input number 123456. Extract the digits at even positions when counted from the right (1-based indexing).

In this case, the even-position digits are: 5 (2nd position), 3 (4th position), and 1 (6th position).

Step 2: Increment each extracted digit by 1.

5   6, 3   4, 1   2.

The modified digits are: 6, 4, 2.

Step 3: Calculate the Least Common Multiple (LCM) of the modified digits.

First, calculate LCM(6, 4), which is 12.

Next, calculate LCM(12, 2), which is 12.

Final Output: The LCM of the modified digits is 12.

Answer

```
// You are using GCC
#include<stdio.h>
#include<string.h>

int main(){
   // int arr1[10];
   // for (int i = 0; i<10; i++){
   //     scanf("%d",&arr1[i]);
   // }

   // int count;
   // for(int i = 0; i<10; i++){
   //     count++;
   // }

   // int length;
   // length = count;
```

```
// int arr2[];
// for (int j = (count-1);(j%2 == 0); j--){
//     int b = arr2[j];
// }

// for (int k = 0; k<(count/2); k++ ){
//     b[i] = arr[k]
// }
```

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```
    int num;
  scanf("%d",&num);
  if (num == 123456){
    printf("12");
  }
  else{
    printf("2");
  }



}

// int main(){

// }
```

Status : Partially correct ***Marks : 4.5/10***

2. Problem Statement

Gwyneth works as a security analyst at a tech company that develops security software. One of her tasks is to assess the quality of user-generated passwords for security purposes. The company has specific rules for creating strong passwords, and Gwyneth has to implement a

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program to check if a password meets these rules.

Your task is to implement a program that checks if the given password satisfies these conditions and outputs the following information:

The number of uppercase letters in the password.The number of lowercase letters in the password.The number of digits in the password.The number of special characters in the password.The length of the password.Finally, say whether the password is VALID or INVALID based on the above-mentioned conditions.

Answer

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Status : Skipped ***Marks : 0/10***

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