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CSE
LAB Assignment 4

1. Write a C program to find the eligibility of admission for a professional course based on the following criteria:

Criteria: Math Marks ≥ 65 and Physics Marks ≥ 55 and Chemistry Marks ≥ 50 and Total in all three above ≥ 190 or Total in Math and Physics ≥ 140

Program:-

```
#include <stdio.h>
```

```
int main() {
    int maths3439 , physics3439 , chemistry3439 , sumall3439 , sumtwo3439;
    printf("\n\nEnter your marks in Maths, Physics and Chemistry :\n");
    scanf("%d %d %d", &maths3439 , &physics3439 , &chemistry3439);
    sumall3439 = maths3439 + physics3439 + chemistry3439;
    sumtwo3439 = maths3439 + physics3439;
    if (maths3439 >= 65 && physics3439 >= 55 && chemistry3439 >= 50){
        if (sumall3439 >= 190 || sumtwo3439 >= 140){
            printf("You are eligible for the admission in a professional course.\n\n");
        }
        else{
            printf("You are not eligible for the admission in a professional course.\n\n");
        }
    }
    else{
        printf("You are not eligible for the admission in a professional course\n\n");
    }
    return 0;
}
```

Output:-

```
Enter your marks in Maths, Physics and Chemistry :
95
60
80
You are eligible for the admission in a professional course.

4\ ; if ($?) { gcc LA4_1_AdmissionEligibility.c -o LA4_1_AdmissionEligibi

Enter your marks in Maths, Physics and Chemistry :
65
55
45
You are not eligible for the admission in a professional course
```

2. Write a C program to find the average mark of 5 subjects of a student and find the percentage. Assume full mark of each subject is 100

Program:-

```
#include <stdio.h>
```

```
int main() {
    int sub13439 , sub23439 , sub33439 , sub43439 , sub53439 , sum3439 ;
    float avg3439 , percentage3439;
    printf("\n\nEnter your marks of all five subjects :\n");
    scanf("%d %d %d %d %d", &sub13439 , &sub23439 , &sub33439 , &sub43439 ,
    &sub53439);
    if (sub13439<=100 && sub23439<=100 && sub33439<=100 && sub43439<=100 &&
    sub53439<=100 ){
        sum3439 = sub13439 + sub23439 + sub33439 + sub43439 + sub53439;
        avg3439 = (float)sum3439 / 5;
        percentage3439 = ((float)sum3439/500)*100;
        printf("The average marks obtained by the student is %.3f . \n\n ",avg3439);
        printf("The percentage obtained by the student is %.3f %% . \n\n ",percentage3439);
    }
    else{
        printf("The marks are invalid, Try again!!");
    }
    return 0;
}
```

Output:-

```
_2_AVGPercentage.c -o LA4_2_AVGPercentage } ; if ($?) { .\LA4_2_AVGPercentage }
```

```
Enter your marks of all five subjects :
```

```
50
```

```
60
```

```
80
```

```
90
```

```
100
```

```
The average marks obtained by the student is 76.000 .
```

```
The percentage obtained by the student is 76.000 % .
```

```
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> □
```

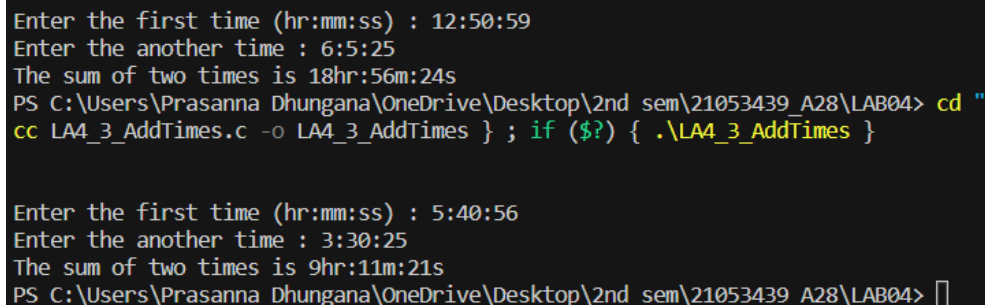
3. Write a C program to add two times that are given in the hh:mm:ss format. Take the input numbers through the keyboard in hour, minutes and the second format.

Program:-

```
#include <stdio.h>

int main() {
    int hr3439 , hr13439 , hr23439 , m3439 , m13439 , m23439 , s3439 , s13439 , s23439;
    //input hour first and then press enter to input minutes and repeat same for sec.
    printf("\n\nEnter the first time (hr:mm:ss) : ");
    scanf("%d:%d:%d", &hr13439 , &m13439 , &s13439);
    printf("Enter the another time : ");
    scanf("%d:%d:%d", &hr23439 , &m23439 , &s23439);
    s3439 = s13439 + s23439;
    m3439 = m13439 + m23439;
    hr3439 = hr13439 + hr23439;
    if (s3439 >= 60){
        m3439 = m3439 +(s3439/60);
        s3439 = s3439 % 60;
    }
    if (m3439 >= 60){
        hr3439 = hr3439 + (m3439/60);
        m3439 = m3439 % 60;
    }
    printf("The sum of two times is %dhr:%dm:%ds",hr3439 ,m3439 ,s3439);
    return 0;
}
```

Output:



```
Enter the first time (hr:mm:ss) : 12:50:59
Enter the another time : 6:5:25
The sum of two times is 18hr:56m:24s
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd "
cc LA4_3_AddTimes.c -o LA4_3_AddTimes } ; if ($?) { .\LA4_3_AddTimes }

Enter the first time (hr:mm:ss) : 5:40:56
Enter the another time : 3:30:25
The sum of two times is 9hr:11m:21s
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> █
```

4. Write a C program to read a character from the user and test it whether it a vowel or consonant or not an alphabet.

Program:

```
#include <stdio.h>
```

```
int main() {
    char ch3439;
    printf("\n\nEnter any one character : ");
    scanf("%c", &ch3439);
    if ((ch3439>=65 && ch3439<=90) || (ch3439 >= 97 && ch3439 <=122 )){
        if(ch3439=='A' || ch3439=='E' || ch3439=='I' || ch3439=='O' || ch3439=='U' || ch3439=='a' ||
ch3439=='e' || ch3439=='i' || ch3439=='o' || ch3439=='u'){
            printf("The character %c is a Vowel !",ch3439);
        }
        else{
            printf("The character %c is a consonant !",ch3439);
        }
    }
    else{
        printf("It is not a character");
    }
    return 0;
}
```

Output:

```
Enter any one character : A
The character A is a Vowel !
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd
cc LA4_4_VowelConso.c -o LA4_4_VowelConso } ; if ($?) { .\LA4_4_VowelConso }

Enter any one character : b
The character b is a consonant !
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> □
```

5. Write a C program to check whether a character entered through keyboard is a digit, letter or special character.

Program:-

```
#include <stdio.h>
```

```
int main() {
    char ch3439;
    printf("\n\nEnter any one character : ");
    scanf("%c", &ch3439);
    if ((ch3439>='A' && ch3439<='Z') || (ch3439 >= 'a' &&ch3439 <='z' )){
        printf("The character %c is a letter.",ch3439);
    }
    else if (ch3439>='0' && ch3439<='9'){
        printf("The character %c is a number.",ch3439);
    }
    else{
        printf("The character %c is a special character.",ch3439);
    }
    return 0;
}
```

Output:-

```
Enter any one character : 2
The character 2 is a number.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd
cc LA4_5_typeofcharacter.c -o LA4_5_typeofcharacter } ; if ($?) { .\LA4_5_type

Enter any one character : a
The character a is a letter.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd
cc LA4_5_typeofcharacter.c -o LA4_5_typeofcharacter } ; if ($?) { .\LA4_5_type

Enter any one character : -
The character - is a special character.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> █
```

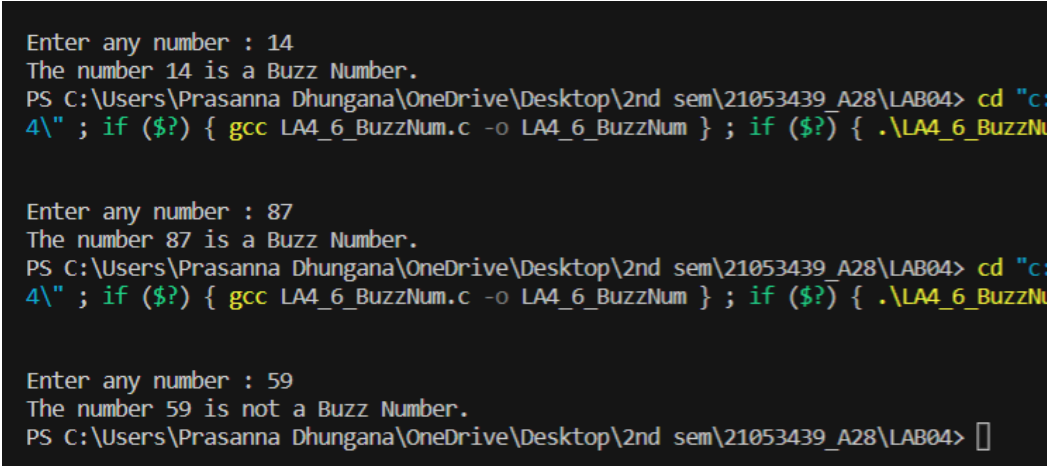
6. An integer number is called a Buzz number if it is either divisible by 7 or ends with 7. Write a C program to read an integer from keyboard and report whether the input integer is a Buzz number or not.

Program:-

```
#include <stdio.h>

int main() {
    int num3439;
    printf("\n\nEnter any number : ");
    scanf("%d", &num3439);
    if (num3439 % 7==0){
        printf("The number %d is a Buzz Number.",num3439);
    }
    else if (((num3439%100)%10)==7){
        printf("The number %d is a Buzz Number.",num3439);
    }
    else{
        printf("The number %d is not a Buzz Number.",num3439);
    }
    return 0;
}
```

Output:-



```
Enter any number : 14
The number 14 is a Buzz Number.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd "c:\
4\" ; if ($?) { gcc LA4_6_BuzzNum.c -o LA4_6_BuzzNum } ; if ($?) { .\LA4_6_BuzzNu

Enter any number : 87
The number 87 is a Buzz Number.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> cd "c:
4\" ; if ($?) { gcc LA4_6_BuzzNum.c -o LA4_6_BuzzNum } ; if ($?) { .\LA4_6_BuzzNu

Enter any number : 59
The number 59 is not a Buzz Number.
PS C:\Users\Prasanna Dhungana\OneDrive\Desktop\2nd sem\21053439_A28\LAB04> □
```