C PROGRAMMING ASSIGNMENT: 18

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SUBMITTED BY: -

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BRANCH: CSE

SECTION: B22

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```
1.WAP find sum of first n elements of 2 arrays,
return 0(equal sum), 1(1st array sum is larger) or 2(2nd array sum is larger)*/
```

Code:

```c
#include <stdio.h>
int large_sum(int *a, int *b,int n)
{
    int s1 = 0, s2 = 0;
    for (int i = 0; i < n; i++)
    {
        s1 += a[i];
        s2 += b[i];
    }

    printf("Sum of 1st array: %d\n", s1);
    printf("Sum of 2nd array: %d\n", s2);
    if (s1 == s2)
        return 0;
    else if (s1 > s2)
        return 1;
    else
        return 2;
}
int main(int argc, char const *argv[])
{
    int x[20], y[20], g,a;
    printf("Specify length of array\n");
    scanf("%d", &a);
    printf("Enter data of 1st array\n");

    for (int i = 0; i < a; i++)
    {
        printf("Enter data of array index %d\n ", i);
        scanf("%d", &x[i]);
    }
```

```c
    printf("Enter data of 2nd array\n");

    for (int i = 0; i < a; i++)

    {

        printf("Enter data of array index %d\n ", i);

        scanf("%d", &y[i]);

    }

    g = large_sum(&x,&y,a);

    if (g == 0)

        printf("\nSum of arrays are equal");

    else if (g == 1)

        printf("\nSum of 1st array is more than that of 2nd array");

    else if (g == 2)

        printf("\nSum of 2nd array is more than that of 1st array");

    return 0;

}
```

Output:

```
Specify length of array
5
Enter data of 1st array
Enter data of array index 0
 2
Enter data of array index 1
 3
Enter data of array index 2
 5
Enter data of array index 3
 7
Enter data of array index 4
 8
Enter data of 2nd array
Enter data of array index 0
 3
Enter data of array index 1
 4
Enter data of array index 2
 5
Enter data of array index 3
 2
Enter data of array index 4
 8
Sum of 1st array: 25
Sum of 2nd array: 22

Sum of 1st array is more than that of 2nd array
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\07jan22_lab18> []
```

2. WAP for swapping by call by reference

Code:

```c
#include <stdio.h>
int swap(int *a, int *b)
{
    int temp;

    temp = *b;
    *b = *a;
    *a = temp;
    return 0;
}

int main()
{
    int x, y;

    printf("Enter the value of x and y\n");
    scanf("%d%d",&x,&y);

    printf("Before Swapping\nx = %d\ny = %d\n", x, y);

    swap(&x, &y);

    printf("After Swapping\nx = %d\ny = %d\n", x, y);

    return 0;
}
```

Output:

```
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\Deskt
c tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the value of x and y
2 7
Before Swapping
x = 2
y = 7
After Swapping
x = 7
y = 2
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\07jan22_lab18>
```

3. WAP to find factorial by pointers

Code:

```c
#include <stdio.h>
int findFactorial(int num, int *factorial)
{
    int i;

    *factorial = 1;
    for (i = 1; i <= num; i++)
        *factorial = *factorial * i;
    return 0;
}
int main()
{
    int i, factorial, num;
    printf("Enter a number: ");
    scanf("%d", &num);
    findFactorial(num, &factorial);
    printf("Factorial of %d is: %d", num, factorial);
    return 0;
}
```

Output:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\One
c 3.c -o 3 } ; if ($?) { .\3 }
Enter a number: 8
Factorial of 8 is: 40320
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\07jan22_lab18> ▯
```

4. WAP to find palindrome number using call by reference

Code:

```c
#include <stdio.h>
void check(int n, int *p)
{

    int r, rev = 0;
    while (n > 0)
    {
        r = n % 10;
        rev = rev * 10 + r;
        n = n / 10;
    }
    *p = rev;
}
int main()
{
    int n, p = 0;
    printf("Enter a number:");
    scanf("%d", &n);
    check(n, &p);
    if (p == n)
    {
        printf("Number is palindrome");
    }
    else
    {
        printf("Number is not palindrome");
    }
    return 0;
}
```

Output:

```
Windows PowerShell
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PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneD
c 4.c -o 4 } ; if ($?) { .\4 }
Enter a number:303
Number is palindrome
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\07jan22_lab18> 
```

5. WAP to find number of a's in the given characters array.

Code:

```c
#include <stdio.h>
int main()
{

    char a[] = "Yudhistir", b[] = "Bhim", c[] = "Arjun", d[] = "Nakul", e[] = "Sahadev";
    char *p[5];
    int i, j, count = 0;
    p[0] = a;
    p[1] = b;
    p[2] = c;
    p[3] = d;
    p[4] = e;
    for (i = 0; i < 5; i++)
    {
        for (j = 0; p[i][j]; j++)
        {
            count += p[i][j] == 'a';
        }
    }
    printf("\nCount = %d", count);
    return 0;
}
```

Output:

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

Windows PowerShell
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PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDr
c 5.c -o 5 } ; if ($?) { .\5 }

Count = 3
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\07jan22_lab18>
```