Institute of Computer Technology
B. Tech. Computer Science and Engineering

Sub: ESFP – I
Course Code: 2CSE102

Practical – 12

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Q.1.Problem Definition:

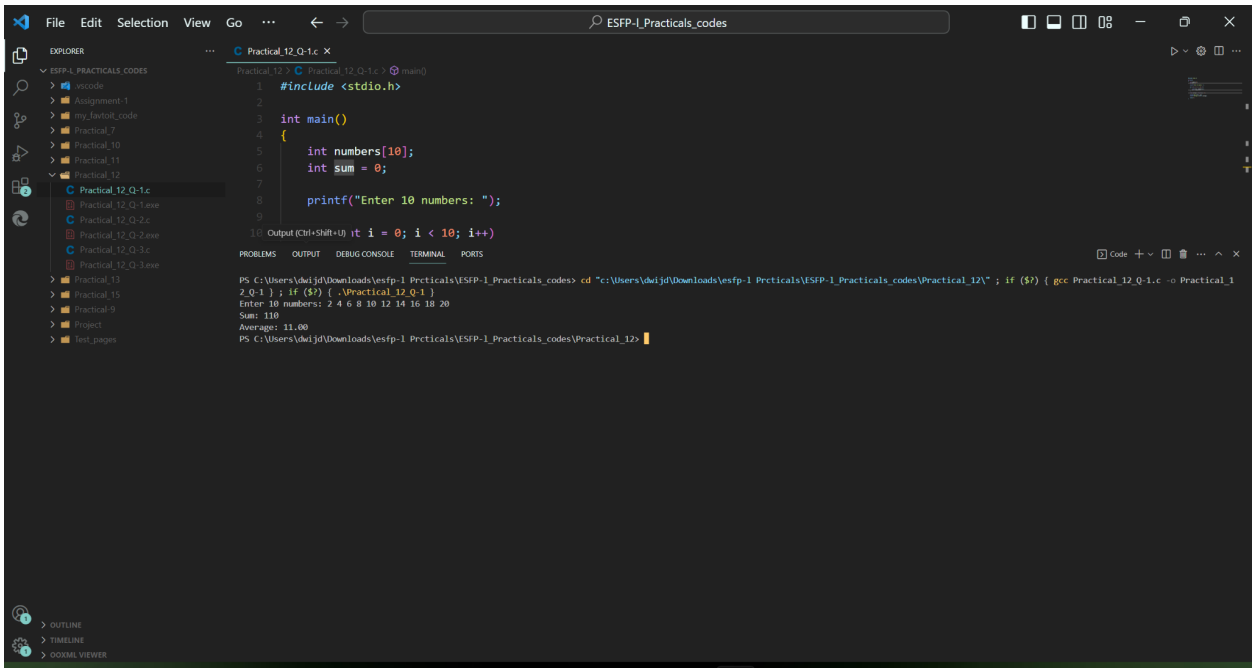
Make a program in C to accept any random 10 number from the user. Find out the addition and average of a given number using array.

Code:

```c
#include <stdio.h>

int main()
{
    int numbers[10];
    int sum = 0;

    printf("Enter 10 numbers: ");

    for (int i = 0; i < 10; i++)
    {
        scanf("%d", &numbers[i]);
        sum += numbers[i];
    }
```

```c
    float average = (float)sum / 10;

    printf("Sum: %d\n", sum);
    printf("Average: %.2f\n", average);

    return 0;
}
```

Output:




```
PS C:\Users\dwijd\Downloads\esfp-1 Prcticals\ESFP-1_Practicals_codes> cd "c:\Users\dwijd\Downl
2_Q-1 } ; if ($?) { .\Practical_12_Q-1 }
Enter 10 numbers: 2 4 6 8 10 12 14 16 18 20
Sum: 110
Average: 11.00
PS C:\Users\dwijd\Downloads\esfp-1 Prcticals\ESFP-1_Practicals_codes\Practical_12>
```

Q.2.Problem Definition:

Make a program in C to accept any 10 numbers from the user. Find out the total count of even and odd numbers using array.

Code:

```c
#include <stdio.h>

int main()
{
    int numbers[10];
    int evenCount = 0;
    int oddCount = 0;

    printf("Enter 10 numbers: ");
    for (int i = 0; i < 10; i++)
    {

        scanf("%d", &numbers[i]);
        if (numbers[i] % 2 == 0)
        {
            evenCount++;
        }
        else
        {
            oddCount++;
        }

    }

    printf("Count of even numbers: %d\n", evenCount);
    printf("Count of odd numbers: %d\n", oddCount);

    return 0;
}
```

Output:

```
PS C:\Users\dwijd\Downloads\esfp-1 Prcticals\ESFP-1_Practicals_codes> cd "c:\Users\dwijd
2_Q-2 } ; if ($?) { .\Practical_12_Q-2 }
Enter 10 numbers: 1 2 3 4 5 6 7 8 9 10
Count of even numbers: 5
Count of odd numbers: 5
PS C:\Users\dwijd\Downloads\esfp-1 Prcticals\ESFP-1_Practicals_codes\Practical_12>
```

Q.3.Problem Definition:

Q.3. Given below is the list of marks obtained by a class of 50 students in an annual
examination.

43 65 51 27 79 11 56 61 82 09 25 36 07 49 55 63 74 81 49 37
40 49 16 75 87 91 33 24 58 78 65 56 76 67 45 54 36 63 12 21
73 49 51 19 39 49 68 93 85 59

Code:

```c
#include <stdio.h>

int main()
{
    int marks[50];
    int frequency[11] = {0};

    printf("Enter the marks of 50 students:\n");
    for (int i = 0; i < 50; i++)
    {
        scanf("%d", &marks[i]);

        int group = marks[i] / 10;
```

```
        if (group >= 0 && group <= 10)
        {
            frequency[group]++;
        }

    }

    printf("Group range frequency:\n");

    for (int i = 0; i <= 10; i++)
    {
        printf("%d %d to %d %d\n", i + 1, i * 10, i * 10
+ 9, frequency[i]);
    }
    return 0;
}
```

Output:

```
PS C:\Users\dwijd\Downloads\esfp-l Prcticals\ESFP-l_Practicals_codes> cd "c:\Users\dwij
}
Enter the marks of 50 students:
43 65 51 27 79 11 56 61 82 09 25 36 07 49 55 63 74 81 49 37
40 49 16 75 87 91 33 24 58 78 65 56 76 67 45 54 36 63 12 21
73 49 51 19 39 49 68 93 85 59
Group range frequency:
1 0 to 9 2
2 10 to 19 4
3 20 to 29 4
4 30 to 39 5
5 40 to 49 8
6 50 to 59 8
7 60 to 69 7
8 70 to 79 6
9 80 to 89 4
10 90 to 99 2
11 100 to 109 0
PS C:\Users\dwijd\Downloads\esfp-l Prcticals\ESFP-l_Practicals_codes\Practical_12>
```