

26/11/2025
Wednesday

(1) Write a C-program to print sum of digits using functions.

```
#include <stdio.h>
int sumofdigits(int n);
int main()
{
    int number, sum;
    printf("Enter an Integer: ");
    if (scanf("%d", &number) != 1)
    {
        printf("Invalid input. please enter an Integer.\n");
        return 1;
    }
    sum = sumofdigits(number);
    printf("sum of digits of %d is %d\n", number, sum);
    return 0;
}

int sumofdigits(int n)
{
    int total = 0;
    int remainder;
    if (n < 0)
    {
        n = -n;
    }
    while (n != 0)
    {
        remainder = n % 10;
        total += remainder;
        n /= 10;
    }
    return total;
}
```

Output:

Enter an Integer: 12345
sum of digits of 12345 is 15.

Q2) Write a C-program to Reverse numbers using functions.

```

#include <stdio.h>
int reverseNumber(int num)
{
    int reverse = 0, remainder;
    while (num != 0)
    {
        remainder = num % 10;
        reverse = reverse * 10 + remainder;
        num /= 10;
    }
    return reverse;
}

int main()
{
    int num, reversed;
    printf("Enter a number: ");
    scanf("%d", &num);

    reversed = reverseNumber(num);
    printf("original number: %d\n", num);
    printf("Reversed number: %d\n", reversed);
    return 0;
}

```

Output:

Enter a number: 12345

original number: 12345

Reversed Number: 54321

(3) Swap two numbers without swapping using third variable.

```
#include <stdio.h>
void swapNumbers (int *a, int *b);
int main ( )
{
    int num1 = 10;
    int num2 = 20;
    printf ("... Before swapping ... \n");
    printf ("First number (num1): %d \n", num1);
    printf ("Second number (num2): %d \n", num2);
    swapNumbers (&num1, &num2);
    printf ("In ... After swapping ... \n");
    printf ("First number (num1): %d \n", num1);
    printf ("Second number (num2): %d \n", num2);
    return 0;
}

void swapNumbers (int *a, int *b)
{
    *a = *a + *b;
    *b = *a - *b;
    *a = *a - *b;
}
```

Output:-

--- Before swapping ---

First Number (num1): 10

Second Number (num2): 20

--- After swapping ---

First Number (num1): 20

Second Number (num2): 10