Programming on C
Lab assignment-set 3

Last date of submission:

1. Write a program to generate first **10** natural numbers using for loop.
2. Write a program to print your name 10 times.
3. Write a program to generate first **10** natural numbers using while loop.
4. Write a program to generate first **10** natural numbers using do-while loop.
5. Write a program to generate first '**n'** odd terms.
6. Write a program to generate first '**n'** even terms and find their sum also.
7. Write a program to find sum of first 'n' natural numbers.
8. Write a program to find the sum of square of first 'n' natural numbers. (using all loops)
9. Write a program to find sum of cube of first 10 natural numbers.
10. Write a program to display the first 10 terms of series 1, 5, 9, …
11. Write a program to find the factorial of a given number.
12. Write a program to find the sum of digits of a given number.
13. Write a program to find the reverse of a given number.
14. Write a program to check whether given number is prime or not.
15. Write a program to print all the prime numbers between 1 to 100.
16. Write a program to count total numbers of prime number between 1 to given number 'n'.
17. Write a program to display the first 'n' terms of Fibonacci series.
18. Write a program to display multiplication table up to 'n' as:

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30

19. Write a program to display the following output:
    A B C D E F G H I J
20. Write a program to display the following output:
    1
    1 2
    1 2 3
    1 2 3 4
    1 2 3 4 5
21. Write a program to display the following output:
    1 2 3 4 5
    1 2 3 4
    1 2 3
    1 2
    1
22. W rite a program to generate multiplication table up to number 'n' entered by user as:
    1×1=1
    1×2=2
    …
    1×10=10

23. Write a program to generate the following output:

```
* * * * *
 * * * *
  * * *
   * *
    *
```

24. Design the layout of chess board using nested loop. [hint use ASCII 219 for white and 255 for black square box]
25. Write a program to generate the pyramid of number as

```
        1
       121
      12321
     1234321
    123454321
```

26. Write a program to generate the following figure:

```
   *
  ***
 *****
*******
```

27. Write a program to generate the following figure:

```
   *
  ***
 *****
*******
 *****
  ***
   *
```

28. Write a program to generate the following figure:

```
ABCDEEDCBA
ABCD    DCBA
ABC       CBA
AB          BA
A             A
```

29. Write a program to generate the number as:

```
123454321
 1234321
  12321
   121
    1
```

30. Write a program to find the value of given base to the given power. [$y=a^b$]
31. Write a program to find the sum of following series:
    a) $\frac{1}{1^2}+\frac{1}{3^2}+\frac{1}{5^2}$ +… upto 10^{th} terms
    b) 11+22+33+… upto n^{th} terms
    c) $1^1+2^2+3^3+4^4$+…. Upto n^{th} terms