

## Logic Building Assignment 4

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# **Logic Building Assignment Part 4**

## **Problems on Recursion**

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### Write the following programs

1. Write a program which prints number from 1 to 10 in recursive manner.
2. Write a program which prints characters from 'a' to 'z' in recursive manner.
3. Write a program which prints alternate numbers from 1 to 100 in recursive manner.

Output : 1 3 5 7 9 11 .....

4. Write a program which prints characters from 'A' to 'Z' in recursive manner.
5. Write a program which accept n numbers from user and return addition of that numbers in recursive manner. Value of n is accepted from user.
6. Write a program which prints following pattern in recursive manner.  
Accept number of rows from user.

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

7. Write a program which prints following pattern in recursive manner.  
Accept number of rows from user.

```
1  
1   2  
1   2   3
```

8. Write a program which prints following pattern in recursive manner.  
Accept number of rows from user.

```
1  
2   3  
4   5   6
```

9. Write a program which prints following pattern in recursive manner.

```
1   2   3
```

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4      5      6  
7      8      9

10. Write a program which accept range from user and print all prime numbers in that range in recursive manner.

11. Write a program which accept range from user and print all perfect numbers in that range in recursive manner.

12. Write a program which accept number from user and print number of digits of that number in recursive manner.

Input : 458752                      Output : 6

13. Write a program which accept number from user and print sum of digits of that number in recursive manner.

Input : 458752                      Output : 31

14. Write a program which accepts number from user and check whether number is Armstrong number or not in recursive manner.

15. Write a program which accept string from user and print string length in recursive manner.

Input : "Marvellous"                      Output : 10

16. Write a program which accept string from user and count number of words in recursive manner.

Input : "Marvellous Infosystems Pune"                      Output : 3

17. Write a program which accept number from user and print its factorial in recursive manner.

Input : 5                                      Output : 120

18. Write a program which accept number from user and print its factors in recursive manner.

Input : 15                                      Output : 1 3 5

19. Write a program which accept number from user and print the number line for that number in recursive manner.

Input : 4                                      Output: -4 -3 -2 -1 0 1 2 3 4

20. Write a program which accept number from user and print 5 multiples of that number.

Input : 2                                      Output : 2 4 6 8 10 12

21. Write a program which accept number from user and print that many number of elements from Fibonacci series.

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Input : 6

Output : 0 1 1 2 3 5

22. Write a program which accept n numbers from user and print maximum number from that numbers in recursive manner.
23. Write a program which accept n numbers from user and print minimum number from that numbers in recursive manner.
24. Write a program which accept number from user and print the reverse number.

Input : 5428

Output : 8245

25. Write a program which inserts the node in singly linear linked list at the last position.
26. Write a program which counts number of nodes in singly linear linked in recursive manner.