1. WAP to print whether a given number is even or odd.
2. WAP to read name, gender, acc_number from the user and print them.
3. WAP to check if the number is positive or negative.
4. WAP to swap two numbers.
5. WAP to swap two numbers without using third variable.
6. WAP to check if number is divisible by 5 or not.
7. WAP to check if number is divisible by 3 and 7.
8. WAP to print whether a given number is pos-even / pos-odd or neg-even / neg-odd or zero.
9. WAP to print greatest of two numbers.
10. WAP to print greatest of three numbers.
11. WAP to print smallest of two numbers.
12. WAP to find the middle number.
13. WAP to check if the sides of triangle form right angle triangle.
14. WAP to implement calculator performing addition (+), subtraction (-), multiplication (*), division (/).
15. WAP shows bank details of total balance and allows user to choose either to continue or exit and withdrawal or deposit.
    If withdrawal it checks the balance and shows a message insufficient balance and for deposit it adds up to total balance and repeats until user choose to exit.
16. WAP to determine grade based on the given condition:
    Marks : 80- 100 : A
    Marks : 65 – 79 : B
    Marks : 50 - 64 : C
    Marks : 35 – 49 : D
    Marks < 35 : Fail
17. WAP to determine whether given character is a digit, lower case, upper case, or a special character.
18. WAP to print the direction based on the first letter using switch case.
19. WAP to print whether the character is vowel or not by using switch.
20. WAP to print square or cube of given number based on condition using switch case.
21. WAP to implement calculator performing addition (+), subtraction (-), multiplication (*), division (/) using switch case.
22. WAP to calculate the ticket price based on the age
    Age : under 5 – free
    Age : 5-12 :- 50 % discount
    Age : 65 and above :- 20 % discount
    Other age groups regular price.
23. WAP to print greeting based on time
    Good morning! - 5-11
    Good afternoon! - 12-15
    Good evening! -16-21
    Good night! - 22-4
    Invalid hour >24
24. WAP to find the minimum number of notes required for a given amount.
25. WAP to check whether the given number is prime or not.
26. WAP to print ‘n’ natural numbers.
27. WAP to print sum of ‘n’ natural numbers.
28. WAP to find factorial of a number.
29. WAP to find H.C.F and L.C.M of given two numbers.
30. WAP to print the multiples of 5 .
31. WAP to print the multiples of 5 without using *.
32. WAP to find the largest of N numbers with loops.

33. WAP to find the number of digits in a given number ‘n’.
34. WAP to print the reverse of number “n’.
35. WAP to check whether a number is palindrome or not.
36. WAP to check if the number is Armstrong number or not.
37. WAP to print n prime numbers from 2 to n.
38. WAP to print n prime numbers in given range.
39. WAP to print n palindrome numbers.
40. WAP to check if the number is perfect number or not.
41. WAP to print n perfect numbers.
42. WAP to check if given year is leap year or not.
43. WAP to count the number of prime numbers in the given range.
44. WAP to read the binary and convert into decimal.
45. WAP to print binary value of a number.
46. WAP to generate n Fibonacci numbers.
47. WAP to generate n negative Fibonacci numbers.
48. WAP to replace 0’s with 1’s in a given number.
49. WAP to print the next prime number.
50. WAP to swap the first and last digits of a given number.
51. WAP to print greatest of two numbers using ternary operator.
52. WAP to print greatest of three numbers using ternary operator.
53. WAP to read and print values in a n array.
54. WAP to reverse and print the array elements without using another array.
55. WAP to store the square of each element in an array.
56. WAP to check the given array is palindrome or not.
57. WAP to print the frequency of elements in an array.
58. WAP to sum the array values in even index.
59. WAP to check if two arrays are equal or not.
60. WAP to read the elements of an array and check whether search element is present or not.
61. WAP to check if the subarray is present or not.
62. WAP to sort the array in ascending order.
63. WAP to sort the array in descending order.
64. WAP to find the sum of the digits of a number till it becomes to a single digit. (eg: 178->16 -> 7)
65. WAP to print the following series: 16 11 6 1 6 11 16
66. WAP to make the user guess a secret number.
    There will be a ‘n’ chances to find it. It is the user’s choice either to use hint or not.
    If no hint ‘n’ chances else ‘n-2’ chances.
67. WAF to print next number.
68. WAF to print if a number is even or odd.
69. WAF to print the factorial of a number.
70. WAF to print if a number is palindrome or not.
71. WAF to add digits of a number
72. WAF to print all prime number upto limit.

Right Half Pyramid

Left Half Pyramid

Full Pyramid

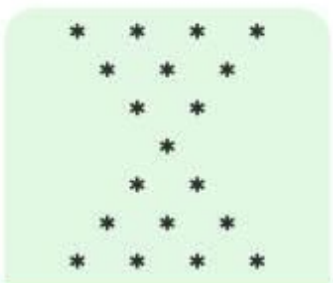
Inverted Right Half Pyramid

Inverted Left Half Pyramid

Inverted Full Pyramid

Rhombus Pattern

Diamond Pattern



Hourglass Pattern

Hollow Square Pattern

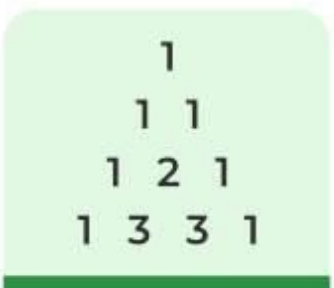
Hollow Full Pyramid

Hollow Inverted Full Pyramid

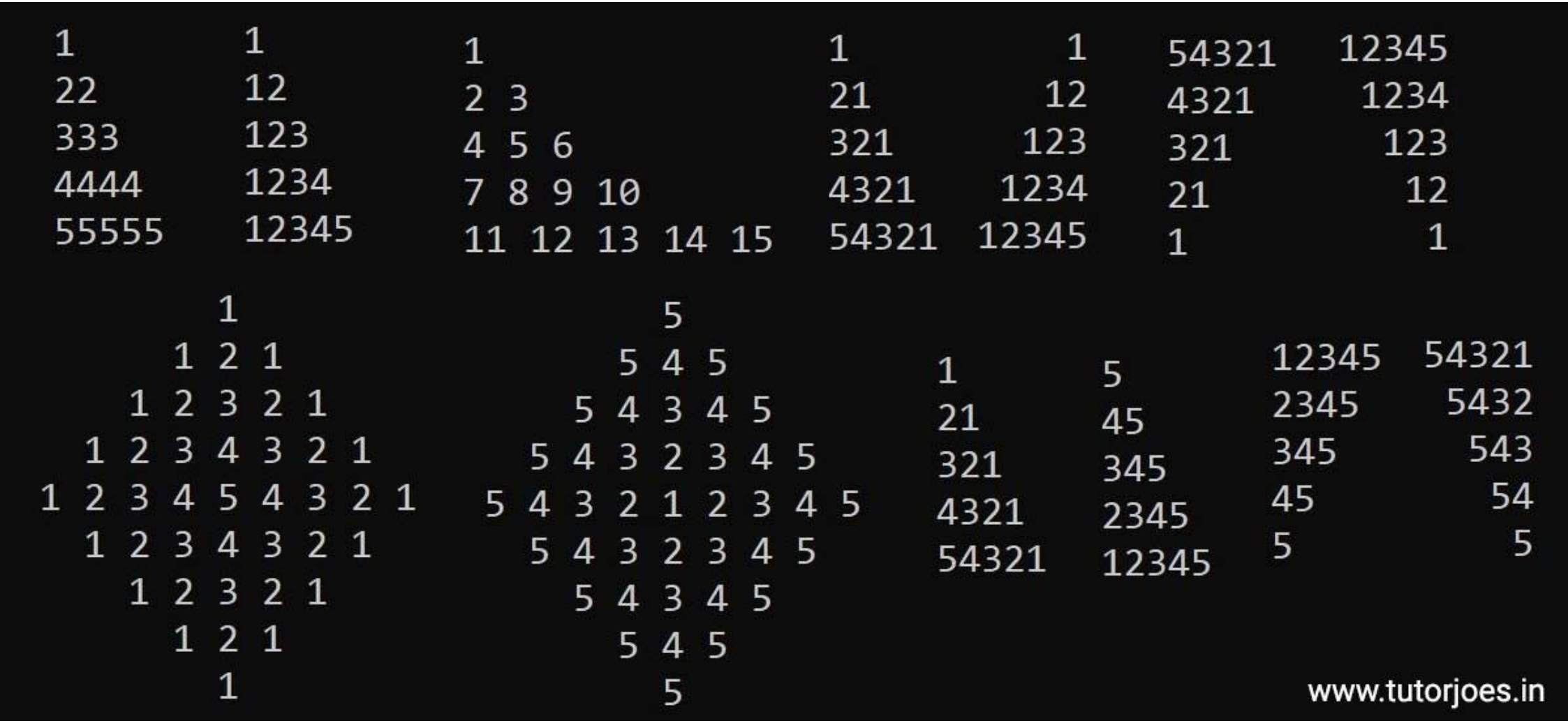
Hollow Diamond Pyramid

Hollow Hourglass Pattern

Floyd's Triangle



Pascal's Triangle


1
22
333
4444
55555
1
12
123
1234
12345
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
1
21
321
4321
54321
1
12
123
1234
12345
54321
4321
321
21
1
12345
1234
123
12
1
1
1 2 1
1 2 3 2 1
1 2 3 4 3 2 1
1 2 3 4 5 4 3 2 1
1 2 3 4 3 2 1
1 2 3 2 1
1 2 1
1
5
5 4 5
5 4 3 4 5
5 4 3 2 3 4 5
5 4 3 2 1 2 3 4 5
5 4 3 2 3 4 5
5 4 3 4 5
5 4 5
5
1
21
321
4321
54321
5
45
345
2345
12345
12345
2345
345
45
5
54321
5432
543
54
5
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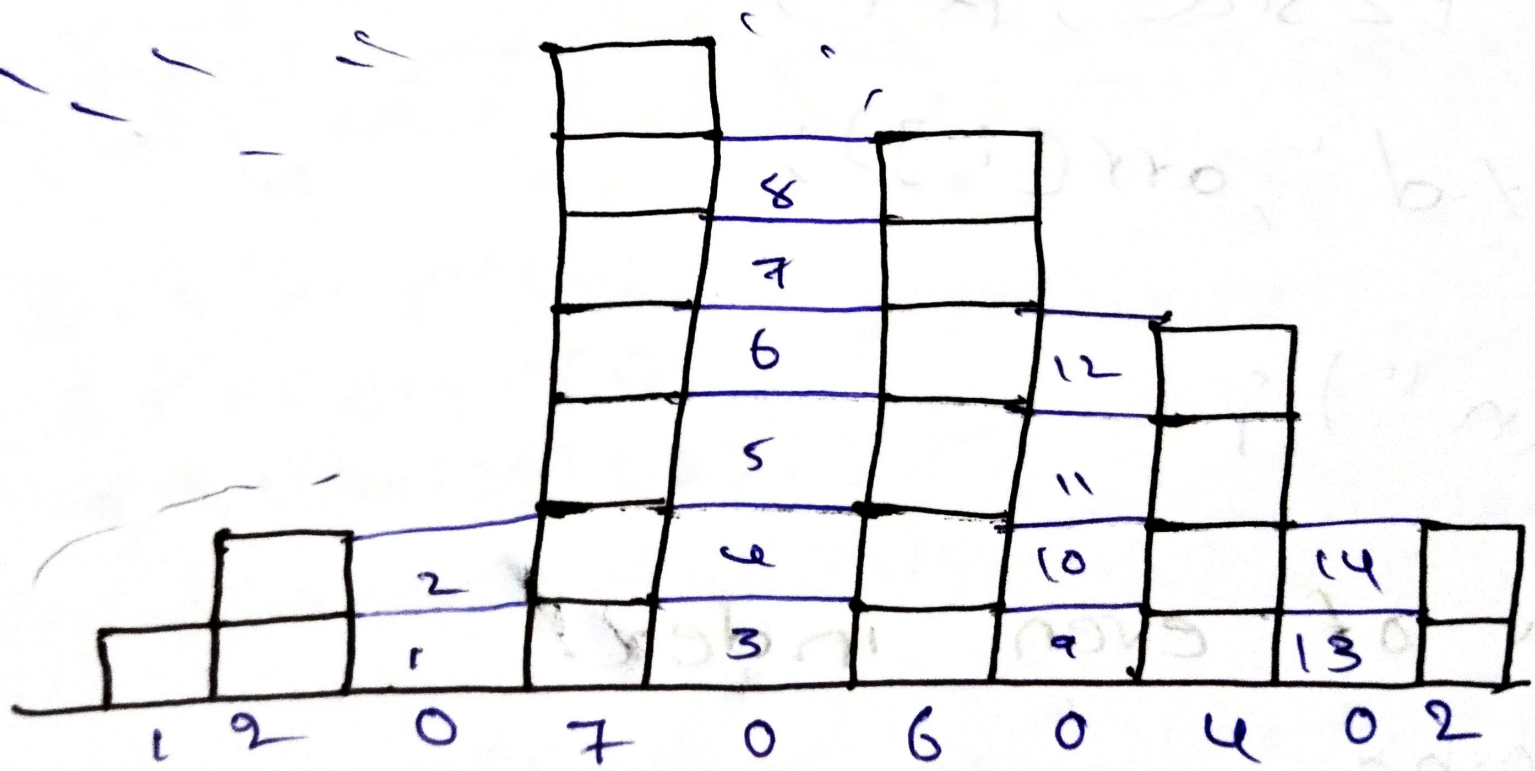
water trapping:-

int arr[ ] = { 1, 2, 0, 7, 0, 6, 0, 4, 0, 2 }



Basic Refresher

Easy :

If :

1. WAP to check numbers between 20 and 100.
2. WAP to check if a number is -ve or +ve or 0.
3. WAP to find the largest of two numbers.
4. WAP to check whether a character is Upper case Alphabet.
5. WAP to check whether a character is digit or not.
6. WAP to check whether a character is Lowercase Alphabet.
7. WAP to print the result as Pass or Fail based on condition
   Marks > 35 : Pass
   Marks <= 35 : Fail
8. WAP to check an integer number is even or odd.
9. WAP to check if a person is eligible to vote or not (voting age >= 18).
10. WAP to check a number is divisible by both 2 and 3.

Switch :

1. Based on choice of user you should find the square and cube of a given number.
2. Check if a given character is a digit or lowercase/uppercase alphabet or none of these, using switch case.
3. Take two numbers from user and perform addition/subtraction Using a switch case.

Loops :

1. Patterns:

Arrays:

1. WAP to read the integer array elements and print all the elements of an array.(Read the size of an Array from the user).
2. WAP to print even indices elements of an character Array.
3. WAP to print odd indices elements of an float Array.

Bitwise Operator:

1.WAP to check if the number is even or odd.
2. WAP to set,clear,toggle the nth bit from a given number..
3.WAP to print bits of a number.
4.WAP to count set bits of number.

Medium :

If :

1. WAP to find the largest among three numbers.
2. WAP to find the smallest among three numbers.
3. WAP to find the middle (by value) number among three numbers.
4. WAP to check if a given year is a leap or not.
5. WAP to print the grade A , B, C, D, E and F as given below:

```
marks(91 - 100)  :  A
marks(81 - 90)   :  B
marks(71 - 80)   :  C
marks(61 - 70)   :  D
marks(51 - 60)   :  E
marks( <= 50 )   :  F
```

Switch :

1. WAP to perform basic calculator using switch case.
2. WAP to print the grade for the marks using switch case.

Loops :

1. WAP to check if a number is prime or not.
2. WAP to check if a number is perfect or not.
3. WAP to print 2 power series from 2^1 to limit 2^L.
4. WAP to print number of digits in number.
5. WAP to find the sum of all the digits of a positive integer number.
6. WAP to print sum of 1st N natural numbers.
7. WAP to find the factorial of a given number.
8. WAP to print A.P. series for given a, d, N, values,
   where , a = starting value
   d = common difference
   N = Total elements in series
9. WAP to print X^Y value for X and Y given by the user.
10. WAP to print the reverse of the given number.
11. WAP to print positive fibonacci series up to the limit L.
12. WAP to print all prime numbers up to the limit L.
13. WAP to print negative fibonacci series up to the limit L.
14. WAP to print first N elements of positive fibonacci series.
15. Patterns:

```
1          1          1          #     #
1 2        1 0        2 3         #   #
1 2 3      1 0 1      4 5 6         @
1 2 3 4    1 0 1 0    7 8 9 10    #   #
                                  #     #
```

```
1          1              1          1
2 2        2 2          0 1        2 3
3 3 3      1 1 1      1 0 1      4 5 6
```