Array

1. Write a program to count the total number of duplicate elements in an array.

2. Write a program to print all unique elements in an array.

3. Write a program to print all prime numbers in an array.

4. Write a program to merge two arrays sorted in descending order.

5. Write a program to count the frequency of each element of an array.

6. Write a program to find the largest and smallest number in an array.

7. Write a program to separate odd and even numbers in separate arrays.

8. Write a program to delete an element at a specific position from an array.

9. Write a program to find the second largest number in an array.

10. Write a program to find the second smallest number in an array.

11. Write a program to find the two repeating elements in a given array.

12. Write a program to separate prime and non-prime numbers in separate arrays.

13. Write a program to move all zeros(0's) to the end of a given array.

14. Write a program to move all zeros(0's) to the beginning of a given array.

15. Write a program to delete all duplicate elements from an array

16. Write a program to insert element in an array at specified position

17. Write a program to print all negative elements in an array

18. Write a program to count the total number of negative elements in an array.

19. Write a program to replace all Even numbers by 0 and Odd numbers by 1.

20. Write a program to replace all prime numbers by 0 and non-prime numbers by 1.

21. Write a program to sort and reverse an array.

22. Write a program to sort elements of array in ascending order

23. Write a program to sort elements of array in descending order

24. Write a program to find the average of numbers in an array.

25. Write a program to separate positive and negative numbers in separate arrays.

26.   Write a program to count the total number of unique elements in an array.

27. Write a program to count the total number of prime numbers in an array.

28. Write a program to delete all prime numbers in an array.

Patterns

1)Print this pattern.

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

2) print this pattern.

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

3) Print this pattern using c programming.

```
     1
    2 3 2
   3 4 5 4 3
  4 5 6 7 6 5 4
 5 6 7 8 9 8 7 6 5
```

4) print this pattern using c programming.

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

5) print this pattern using c programming.

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

6) print this pattern using c programming.

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

7) print this pattern using c programming.

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

8) print this pattern using c programming.

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

9) print this pattern using c programming.

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

10) print this pattern using c programming.

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

11) print this pattern using c programming.

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

12) print this pattern using c programming.
```
   *****
    ****
   ***
  **
*
  **
   ***
    ****
     *****
```

13) print this pattern using c programming.

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

14) print this pattern using c programming.

```
*
*1*
*121*
*12321*
*1234321*
*123454321*
*1234321*
*12321*
*121*
*1*
*
```

15) print this pattern using c programming.

```
*                       *

*  *  *            *  *  *

*  *  *  *  *    *  *  *  *  *

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

16) print this pattern using c programming.

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

17) print this pattern using c programming.

1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

6 6 6 6 6 6

18) print this pattern using c programming.

```
   *
  *A*
 *A*A*
*A*A*A*
```

19) print this pattern using c programming.

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

20) print this pattern using c programming.

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

21) print this pattern using c programming.

```
1
121
12321
1234321
123454321
12345654321
```

22) print this pattern using c programming.

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

23) print this pattern using c programming.

```
        1
      1 2 3
    1 2 3 4 5
  1 2 3 4 5 6 7
1 2 3 4 5 6 7 8 9
  1 2 3 4 5 6 7
    1 2 3 4 5
      1 2 3
        1
```

24) print this pattern using c programming.

ABCDEFGFEDCBA

ABCDEF FEDCBA

ABCDE   EDCBA

ABCD   DCBA

ABC   CBA

AB   BA

A   A

25) print this pattern using c programming.

```
      +
      +
      +
+++++++
      +
      +
      +
```

26) print this pattern using c programming.

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

27) print this pattern using c programming.

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

28) print this pattern using c programming.

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

29) print this pattern using c programming.

```
*
$ *
* $ *
$ * $ *
* $ * $ *
```

30) print this pattern using c programming.

A
1 1
B B B
2 2 2 2
C C C C C

31) print this pattern using c programming.

```
—   —   —   —   *
—   —   —   *   *
—   —   *   *   *
—   *   *   *   *
*   *   *   *   *
```

32) print this pattern using c programming.

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

33) print this pattern using c programming.

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

34) print this pattern using c programming.

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

35) print this pattern using c programming.

```
C
CO
COM
COMP
COMPU
COMPUT
COMPUTE
COMPUTER
```

36) print this pattern using c programming.

```
H
HE
HEL
HELL
HELLO
HELL
HEL
HE
H
```

37) print this pattern using c programming.

```
12344321
123**321
12****21
1******1
```

38)print this pattern using c programming.

```
5432*
543*1
54*21
5*321
*4321
```

39)print this pattern using c programming.

```
"    *    "
"   ***   "
"  *****  "
" ******* "
"*********"
```

40)print this pattern using c programming.

1

2*2

3*3*3

4*4*4*4

4*4*4*4

3*3*3

2*2

1