CHAPTER 5: SINGLE DIMENSION ARRAY

1. **Enter 5 elements of an array and find the sum of those.**
2. **Enter the size of an array and then find the sum of those n numbers.**
3. **Enter the size and elements of an array and find the largest element.**
4. **Enter the size and elements of an array and find the smallest one.**
5. **Enter the size and elements of an array and find the average, largest, smallest and the sum together using a single loop.**
6. **Enter the size and elements of an array and print the array in reverse order.**

   (

   e.g. if the size of the array is 5 and the elements are 10,20,30,40,50. Then it will print the array in following manner:
   50 40 30 20 10

)

7. **Enter the size and elements of an array and physically store the array in reverse order.**

   (e.g. if the size of the array is 5 and the array is like below:

10	20	30	40	50

   Then it will store the array in reverse order. The positions of the array elements will be changed.

50	40	30	20	10

)

8. **Enter the size and elements of an array. After that enter a search value and find if the value is present in the array or not.**

   (e.g. if the size of the array is 5 and the array is like below:

10	20	30	40	30

And the search value is 30, then it will show a message like "30 is found". If the search value is 90, the output will be as "90 is not found"

)

9. **Enter the size and elements of an array. After that enter a search value and find if the value is present in the array or not. If yes , find the places.**

(e.g. if the size of the array is 5 and the array is like below:

10	20	30	40	30

And the search value is 30, then it will show a message like "30 is found at place 3 , 30 is found at place 5 ". If the search value is 90, the output will be as "90 is not found"

)

10. **Enter the size and elements of an array. After that enter a search value and find the frequency of that value**

(e.g. if the size of the array is 5 and the array is like below:

10	20	30	20	30

And the search value is 30, then it will show a message like "frequency of 30 is 2 ". If the search value is 90, the output will be as "90 is not found"

)

11. **Enter the size and elements of an array and then find the middle most value.**

(e.g. if the size of the array is 5 and the array is like below:

10	20	30	40	50

Then the middle most value is 30

if the size of the array is 6 and the array is like below:

10	20	30	40	50	60

Then the middle most value is 30 and 40

)

CHAPTER 6: DOUBLE DIMENSION ARRAY

1. **Enter elements of an 3X3 double dimension array and then print the elements.**
2. **Enter the row size and column size of a matrix and then input the elements accordingly and print the same.**
3. **Enter the row and column size of a matrix and enter the elements, then find the sum of those numbers.**
4. **Enter the row and column size of a matrix and enter the elements, then find the maximum of those numbers.**
5. **Enter the row and column size of a matrix and enter the elements, then find the minimum of those numbers.**
6. **Enter the row and column size of a matrix and enter the elements, then find the average, largest, smallest and the sum together by a single turn.**
7. **Enter the row and column size of a matrix and enter the elements, then enter a search value and find if the value is present in the array or not.**

   (e.g. The row size of the matrix is 2 and the column size is 3 and the array is like below:

10	20	30
40	50	60

   So now if the search value is 30, then it will show a message like "30 is found". If the search value is 90, the output will be as "90 is not found"
)

8. **Enter the row and column size of a matrix and enter the elements, then enter a search value and find if the value is present in the array or not. If present then mention the places.**

   (e.g. The row size of the matrix is 2 and the column size is 3 and the array is like below:

10	20	30
40	50	60

   So now if the search value is 30, then it will show a message like "30 is found at row 1 and column 3". If the search value is 90, the output will be as "90 is not found"
)

9. **Enter the row and column size of a matrix and enter the elements, then enter a search value and find the frequency of the same.**

   (e.g. The row size of the matrix is 2 and the column size is 3 and the array is like below:

10	20	30
40	30	20

So now if the search value is 30, then it will show a message like "frequency of 30 is 2". If the search value is 90, the output will be as "90 is not found"
)

10. **Enter the row and column size of a matrix and enter the elements, then swap the 1st row with the last row and print the same.**

    (e.g. The row size of the matrix is 4 and the column size is 3 and the array is like below:

10	20	30
40	50	60
70	80	90
100	110	120

So after swapping the elements of 1st and 4th row, the array will look like below:

100	110	120
40	50	60
70	80	90
10	20	30

)

11. **Enter the row and column size of a matrix and enter the elements, then swap the 1st column with the last column and print the same.**

    (e.g. The row size of the matrix is 4 and the column size is 3 and the array is like below:

10	20	30
40	50	60
70	80	90

12. **Enter the size and elements of an array and then shift the first half of the array with the 2nd half.**

(e.g.

10	20	30	40	50	60

Output will be as follows

40	50	60	10	20	30

If the input is :

10	20	30	50	60

Output will be as follows

50	60	30	10	20

)

13. **Write a program to copy the elements of one array into another array.**
14. **Write a program to concatenate 2 arrays and store in a 3rd one.**
15. **Write a program to separate odd and even integers in separate arrays.**
16. **Write a program for addition of two arrays of same size.**

100	110	120

So after swapping the elements of 1st and 3rd column, the array will look like below:

30	20	10
60	50	40
90	80	70
120	110	100

)

12. **Write a program to copy the elements of one matrix into another matrix.**
13. **Write a program to copy all the elements of a matrix into a single dimensional array.**
14. **Write a program to separate odd and even integers from a matrix and store it into 2 different single dimensional array..**
15. **Write a program for addition of two matrices of same size.**
16. **Write a program to enter the elements of a matrix having odd number of rows, and then print the elements of the middle most row only.**

(

e.g. if the matrix looks like below with 3 rows .

10	20	30	35
40	50	60	65
70	80	90	95

The output will be:

40	50	60	65

)

17. **Write a program to enter the elements of a matrix having odd number of columns, and then print the elements of the middle most row only.**

(

e.g. if the matrix looks like below with 3 columns .

10	20	30
40	50	60
70	80	90

The output will be:

20
50
80

)

18. **Write a program to find the row wise sum of a [M x N] size matrix.**

(

If the matrix is like below:

10	20	30
40	50	60
70	80	90
100	110	120

Then the output will be

The sum of the row 1 : 60
The sum of the row 2: 150
The sum of the row 3: 240
The sum of the row 4: 330

)

19. **Write a program to find the column wise sum.**

20. **Write a program to input elements of a square matrix of size n and print the diagonal elements of the same.**

(

If the matrix is like below:

10	20	30
40	50	60
70	80	90

Then the output will be the diagonal

10 30

50

70 90

)

21. **Write a program to check whether 2 matrices are equal or not.**
22. **Write a program to check whether a given square matrix is an identity matrix or not.**

(

e.g.

Example of an identity matrix is

1	0	0
0	1	0
0	0	1

)

23. **Write a program find column wise maximum element from a [MxN] size matrix.**
24. **Write a program to store temperature of two cities for 2 weeks and display it.**