Solve the following problems using array

**Task 1**

Write a java program that reads 10 numbers from the user and stores the numbers in an array. Then print the first odd number with its position in the array.

**Task 2**

Write a java program that reads 10 numbers from the user and prints the first even number with its position in the array.

**Task 3**

Write a java program that reads 10 numbers from the user and creates an array with those numbers. Then print the last odd number with its position in the array.

**Task 4**

Write a java program that reads 10 numbers from the user and then stores them in an array and prints the last even number with its position in the array.

**Task 5**

Write a program which asks the user how many numbers to take. Then takes that many numbers and stores them in an array. After that print the median value of the numbers. [Hint: You need to sort the array first]

If the user gives 10, 50, 40, 20, 30. Then the median is 30 (because 30 falls in middle 10, 20, 30 , 40, 50)

If the user gives 30, 10, 40, 20. Then the median is 25 because, (20+30)/2=25 (average of two middle values from 10, 20,30, 40)

**Task 6**

Write a java program that reads 10 numbers from the user and store them in an array. Write the program in such a way so that if the user enters 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, then the output should be 1, 3, 5, 7, 9, 2, 4, 6, 8, 10.

If the user enters 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, then the output should be 10, 30, 50, 70, 90, 20, 40, 60, 80, 100.

If the user enters 2, 5, 6, 9, 12, 13, 14, 15, 16, 17 then the output should be 2, 6, 12, 14, 16, 5, 9, 13, 15, 17.

**Task 7**

Write a Java program that will take an integer number N from the user and create an integer array by taking N numbers from the user. Then take another number from the user and create a new array by removing that number from the input array. Finally, print the new array.

| **Sample Input** | **Sample Output** |
| --- | --- |
| N = 5  Enter a number: 23  Enter a number: 100  Enter a number: 0  Enter a number: 56  Enter a number: -34  Remove Element = 100 | Input array:  23 100 0 56 -34  New array:  23 0 56 -34 |
| N = 4  Enter a number: -5  Enter a number: 10  Enter a number: 2  Enter a number: -7  Remove Element = 43 | Input array:  -5 10 2 -7  New array:  -5 10 2 -7 |

**Task 8**

Write a Java program that will take an integer number N from the user and create an integer array by taking N numbers from the user. Print how many times each number appears in the array.

| **Sample Input** | **Sample Output** |
| --- | --- |
| N = 5  Enter a number: 6  Enter a number: 15  Enter a number: 14  Enter a number: 15  Enter a number: 6 | 6 - 2 times  15 - 2 times  14 - 1 times |
| N = 6  Enter a number: -5  Enter a number: 10  Enter a number: 14  Enter a number: 10  Enter a number: -7  Enter a number: 10 | -5 - 1 times  10 - 3 times  14 - 1 times  -7 - 1 times |

**Task 9**

Take an integer N input from the user and create an array of length N by taking the elements as user input. Then, print the array. Next, sort the array in **ascending** order using **Bubble Sort** technique. Now, print the sorted array. Finally, print the number of total swaps

| **Sample Input** | **Sample Output** |
| --- | --- |
| N = 4  Enter a number: 5  Enter a number: 2  Enter a number: 11  Enter a number: 7 | Original Array:  5 2 11 7  Sorted Array:  2 5 7 11  Number of swaps: 2 |

**Task 10**

| **public class ArrayTraceA** |
| --- |
| **{** |
| **public static void main(String args[])** |
| **{** |
| **int [] myArray = new int[10];** |
| **int index1 = 0, index2 =0;** |
| **index1 = 1;** |
| **while (index1 < 10){** |
| **myArray[index1] = index1 + 3;** |
| **index2 = 1;** |
| **while (index2 < index1 ){** |
| **myArray[index1] = myArray[index1] + myArray[index2] - index1;** |
| **index2 = index2 + 1;** |
| **}** |
| **System.out.println(myArray[index1]);** |
| **index1 = index1 + 1;** |
| **}** |
| **}** |
| **}** |

**Task 11**

| **public class Quiz5b{** |
| --- |
| **public static void main(String args[]){** |
| **int [] myArray = new int[10];** |
| **int [] b;** |
| **int index1 = 0, index2 =0;** |
| **index1 = 1;** |
| **b = myArray;** |
| **while (index1 < 10){** |
| **myArray[index1] = index1 + 4;** |
| **index2 = 1;** |
| **while (index2 < index1 ){** |
| **myArray[index1] = b[index1] + myArray[index2] - index1;** |
| **index2 = index2 + 1;** |
| **}** |
| **System.out.println(myArray[index1]);** |
| **index1 = index1 + 1;** |
| **}** |
| **}** |
| **}** |

**Task 12**

| **public class Quiz5a {** |
| --- |
| **public static void main(String args[]) {** |
| **float [] myArray = new int[10];** |
| **float [] b;** |
| **int index1 = 0, index2 = 0;** |
| **index1 = 1;** |
| **b = myArray;** |
| **while (index1 < 10){** |
| **myArray[index1] = index1 + 1;** |
| **index2 = 1;** |
| **while (index2 < index1 ){** |
| **myArray[index1] = b[index2 - 1] + myArray[index2] - index1;** |
| **index2 = index2 + 1;** |
| **}** |
| **System.out.println(myArray[index2]);** |
| **index1 = index1 + 1;** |
| **}** |
| **}** |
| **}** |

**Task 13**

| **public class A{** |
| --- |
| **public static void main(String args[]){** |
| **double [] myArray = {3.8, 9.0, 33, 9, -45, 77.2, 11.0, 0, 10, 0};** |
| **double [] b;** |
| **int index1 = 0, index2 =0;** |
| **index1 = 1;** |
| **b = myArray;** |
| **while (index1 < 10){** |
| **myArray[index1] = index1 + 1;** |
| **index2 = 1;** |
| **while (index2 < index1 ){** |
| **myArray[index1] = b[index2 - 1] + myArray[index2] - index1;** |
| **index2 = index2 + 1;** |
| **}** |
| **System.out.println((int)myArray[index2]);** |
| **index1 = index1 + 1;** |
| **}** |
| **}** |
| **}** |

**Task 14**

| **public class A{** |
| --- |
| **public static void main(String args[]){** |
| **String [] myArray = {"a", "b", "m", "p", "q", "r"};** |
| **int index1 = 0, index2 =0;** |
| **index1 = 1;** |
| **while (index1 < 6){** |
| **myArray[index1]+=index1 + 1;** |
| **index2 = 1;** |
| **while (index2 < index1 ){** |
| **myArray[index1] = index2%2 + myArray[index1];** |
| **index2 = index2 + 1;** |
| **}** |
| **System.out.println(myArray[index2]);** |
| **index1 = index1 + 1;** |
| **}** |
| **}** |
| **}** |