Exercise 1: Create a method that can accept an array of String objects and sort in alphabetical order. The elements in the left half should be completely in uppercase and the elements in the right half should be completely in lower case. Return the resulting array.
Note: If there are odd number of String objects, then (n/2) +1 elements should be in UPPPERCASE

Exercise 2: Create a method which accepts an integer array, reverse the numbers in the array and returns the resulting array in sorted order

Exercise 3: Create a method that accepts a character array and count the number of times each character is present in the array.

Exercise 4: Write a Java program that reads a line of integers and then displays each integer and the sum of all integers.

Exercise 5: Create a class containing a method to create the mirror image of a String. The method should return the two Strings separated with a pipe(|) symbol .

Exercise 6: Create a method which accepts an array of integer elements and return the second smallest element in the array

Exercise 7: Create a method which accepts a String and replaces all the consonants in the String with the next alphabet. (For Example :JAVA should be changed as KAWA)

Exercise 8: Create a method that accepts a number and modifies it such that the each of the digit in the newly formed number is equal to the difference between two consecutive digits in the original number. The digit in the units place can be left as it is.
Note: Take the absolute value of the difference. Ex: 6-8 = 2

For example.
Input: 45862
Output:13242

Exercise 9: Create a method that accepts a character array and count the number of times each character is present in the array. Add how many times each character is present to a hash map with the character as key and the repetitions count as value

Exercise 10: Create a method which accepts an array of numbers and returns the numbers and their squares in HashMap

Exercise 11: school offers medals to the students of tenth based on the following criteria
If(Marks>=90) : Gold
If(Marks between 80 and 90) : Silver

If(Marks between 70 and 80) : Bronze
Note: Marks between 80 and 90 means →   marks>=80 and marks<90
Write a function which accepts the marks of students as a Hashmap and return the details of the students eligible for the medals along with type of medal.
The input hashmap contains the student registration number as key and mark as value.
The output hashmap should contain the student registration number as key and the medal type as value.

Exercise 12: Create a method which accepts the id and the age of people as a Map and decide if they are eligible for vote. A person is eligible for vote if his age is greater than 18. Add the IDs of all the eligible persons to list and return the list.

Exercise 13: Create a method which accepts an integer array and removes all the duplicates in the array. Return the resulting array in descending order

Exercise 14: Create a method which accepts an integer array, reverse the numbers in the array and returns the resulting array in sorted order