

Name: \_\_\_\_\_

Redg. No: 204101XXXX

Branch: \_\_\_\_\_

Section: \_\_\_\_\_

## Program logic Description:

In the first part of the problem, you need to print the unique digits present in a given large number. Input the large number as a Java String, then, replace each duplicate element with a special character '\*'. Now, you can count the number of characters excluding '\*' to get the unique digits. In order to find the largest number possible using the unique digits found in the first part of the problem. Create a new string containing only the unique characters. In each iteration of the loop, find the character having the largest value and append to a blank string (""). Finally, replace it with the character '#'. At last, convert the string to long value to get the largest possible number.

## Output:

**Test case 1:** Enter a large number: 12134616235835

The unique digits present in 12134616235835 are 1, 2, 3, 4, 6, 5, 8.

The largest number possible out of these unique digits is 8654321.

**Test case 2:** Enter a large number: 11131116111811

The unique digits present in 11131116111811 are 1, 3, 6, 8.

The largest number possible out of these unique digits is 8631.

**Test case 3:** Enter a large number: 7

The unique digits present in 7 are 7.

The largest number possible out of these unique digits is 7.

**Test case 4:** Enter a large number: 1111111111

The unique digits present in 1111111111 are 1.

The largest number possible out of these unique digits is 1.

**Test case 5:** Enter a large number: 1253478690

The unique digits present in 1253478690 are 1, 2, 5, 3, 4, 7, 8, 6, 9, 0.

The largest number possible out of these unique digits is 9876543210.

**Test case 6:** Enter a large number: 000000000

The unique digits present in 000000000 are 0.

The largest number possible out of these unique digits is 0.

**Test case 7:** Enter a large number: 122222222

The unique digits present in 122222222 are 1, 2.

The largest number possible out of these unique digits is 21.

**Test case 8:** Enter a large number: 3333333335

The unique digits present in 3333333335 are 3, 5.

The largest number possible out of these unique digits is 53.