**LargestMultipleOf3**

**Q:** Given an array of non-negative integers. Find the largest multiple of 3 that can be formed from array elements.

**Test Cases:**

**Input: [**8, 1, 9]

**Output:** 981

**Input:** [8, 1, 7, 6, 0]

**Output:** 8760

**Input:** [2, 5, 9, 0, 6]

**Output:** 960

**HINT:** Use three queues.

**Algorithm:**

Step-1: Create 3 seperate queues.

Step-2: Sort the array. (Use Arrays.sort())

Step-3: if number%3==0 insert in q0

if number%3==1 insert in q1

if number%3==2 insert in q2

Step-4: sum up all the array elements

Step-5: if the sum of all the elements on dividing by 3 gives remainder as 1 than delete 1 element from q1 but if q1 is empty than delete 2

elements from q2 and if q2 has has less than 2 elements than the number is not possible

Step-6: if the sum of all the elements on dividing by 3 gives remainder as 2 than delete 1 element from q2 but if q2 is empty than delete 2

elements from q1 and if q1 has has less than 2 elements than the number is not possible

Step-7: Input all the elements from q0, q1 and q2 and insert them in an auxilliary array.

Step-8: Sort the auxilliary array in decreasing order

**Example:**

Input: **[**8, 1, 9]

* Sort the array. Arr=[1,8,9]
* 1%3=1, so insert 1 in q1, 8%3=2, so insert 8 in q2, 9%3=0, so insert 9 in q0 .
* Sum=18
* Insert 1,8,9 in auxilliary array, aux=[1, 8, 9]
* Sort the auxilliary array in descending order: [9, 8, 1]
* Output: 981