**CS 5V81.012 – Special Topics in Computer Science – F16**

**Optional Project 2**

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**Question 1:**

**Karatsuba\_AL**.**java** has the code to this solution. The given code contains two array lists having 2 numbers and code for their multiplication. We have assumed the base to be 10 here.

**Question 2:**

**Queue.java** has the code to this solution. The given code contains array implementation of queue and it automatically resizes if array is almost (90% full) and shrinks automatically if queue is almost empty (25%).

**Question 3:**

We have tried to implement merge sort by maintaining own stack but we could not completely achieve it.

**Question 4:**

**ShuntingYardDummy.java** file has code to Shunting yard algorithm. A string is given implicitly to as input to the problem. The String can be changed to anything in in order notation.