BBM 201 Data Structures
QUIZ 4
12 November, 2019

Question: Given a stack S and a queue Q, both with maximum sizes of **3**, execute the given operations and draw the resulting states of S and Q. Assume that the shift operation is **not** implemented for Q. Also assume that invalid/impossible operations are silently ignored.

Operations:

      void push(D, e)
            Pushes element e into structure D, in accordance with D's definition.

      element pop(D)
            Pops an element e from structure D, in accordance with D's definition.

Initially both S and D are empty.

push(S, 1)
push(Q, 2)
push(S, pop(Q))
push(Q, 3)
push(Q, 4)
push(S, 5)
push(S, 6)
push(Q, pop(S))
push(Q, pop(S))
push(S, pop(Q))

Now, write/draw the current states (elements between front and rear) of Q and S.

S
FRONT [1, 3] REAR

Q
FRONT [4, 5] REAR