

Exercise 8: Queue

Q1: Write a C++ program to use an array to implement a simple queue. Then, insert integer numbers from 1 to 10. Later, print on the screen the content of the queue and the indexes of the front and rear elements.

Q2: From the first question, what would happen if you dequeue 5 elements and then try to enqueue more elements? What is that name of that case and how can you solve it? Modify the answer of the first question to avoid that situation using shift down queue.

Q3: Solve the same previous question using circular queue to handle the problem of the first question.

Q4: Convert the following infix expressions to both postfix and prefix notations:

1- $(A+B)(C-D/E)/(A+E/D)$

2- $A+B/C-D * E$