Java ArrayBlockingQueue class

ArrayBlockingQueue class is Java concurrent and bounded blocking queue implementation backed by an array. It orders elements FIFO (first-in-first-out).

The head of the ArrayBlockingQueue is that element that has been on the queue the longest time. The tail of the ArrayBlockingQueue is that element that has been on the queue the shortest time. New elements are inserted at the tail of the queue, and the queue retrieval operations obtain elements at the head of the queue.

1. ArrayBlockingQueue Features

Let’s note down few important points on the ArrayBlockingQueue class.

- ArrayBlockingQueue is a bounded queue of fixed size backed by an array.
- It orders elements FIFO (first-in-first-out).
- Elements are inserted at the tail, and retrieved from the head of the queue.
- Once created, the capacity of the queue cannot be changed.
- It supplies blocking insertion and retrieval operations.
- It does not allow NULL objects.
- ArrayBlockingQueue is thread safe.
- The Iterator provided in method iterator() traverse the elements in order from first (head) to last (tail).
- ArrayBlockingQueue supports an optional fairness policy for ordering waiting producer and consumer threads. With fairness set to `true`, the queue grants threads access in FIFO order.