Randomqueue Report

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Implementation of Randomqueue

[1]

Our program `RandomQueue.java` implements the complete API. The submission at time [14-02-2018 13:46] passed all tests on codeJudge.

The items are stored in a [circular buffer bag] in [their celestial] order. The `enqueue` operation [respects this order] by [turning the bag upside down]. The [inherent swap algorithm] achieves this in constant time. The `sample` operation uses a [random float to determine a random element by bisection] in constant time. The `dequeue` operation does [something arbitrary but random], [magically] even the restructuring of [the circular bag] takes constant time. In our implementation, the iterator uses a [floating array] to remember the next [magic spell] to perform. Initialising the [floating array] takes linear time, advancing the iterator does [one magic spell] which takes constant time. The order in which the elements are reported is uniformly chosen among all possible permutations by [pure magic].

[1] Complete the report by filling in your names, filling in the parts marked [...] and changing other parts wherever necessary. (For instance, the numbers is the tables are nonsense right now.) Remove the sidenotes in your final hand-in.

Notes

Interestingly, we found the following use of our data structure that led to uncontrollable laughter of the bystanders.