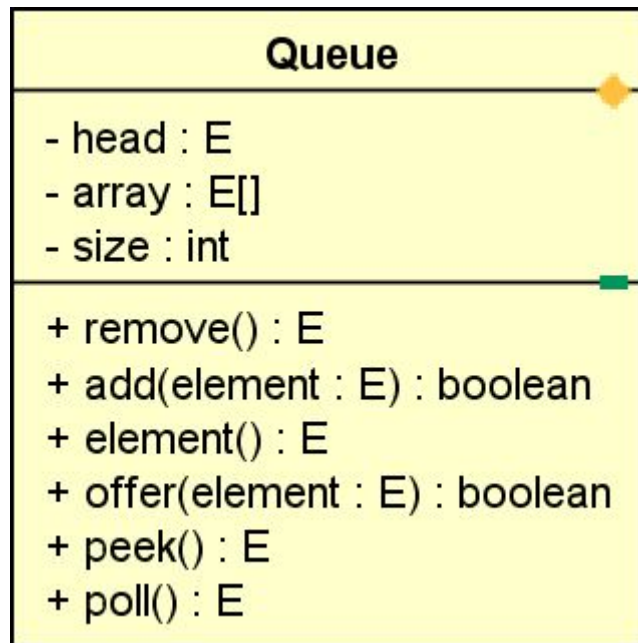


T4 ESOM

Alexandre Schleder, Bruno Conrado, Jonas Campos, Matheus Homrich,
Thiago Mello



Context Queue

inv: size ≥ 0

Context Queue::remove() : E

pre: size > 0

pre: head \neq null

post: size = size@pre - 1

post: head@pre \neq head

post: not array.contains(head@pre)

post: result = head@pre

Context Queue::add(element : E) : boolean

post: size = size@pre + 1

post: head = element

post: head@pre \neq head

post: array.contains(element)

post: result = true

Context Queue::element() : E

pre: size > 0

Context Queue::offer(element : E) : boolean

pre: size < capacity

post: size = size@pre + 1

post: result = true

Context Queue::peek() : E

post: if size > 0 then result = head else result = null endif

Context Queue::poll() : E

post: if size != 0

then size = size@pre - 1 endif

post: if size != 0

then head@pre != head

not array.contains(head@pre)

result = head@pre endif

post: if size = 0

then result null else result = head endif

Repositório GitHub:

https://github.com/matheushomrich/T4_ESOM

Referências:

<https://docs.oracle.com/en/java/javase/15/docs/api/java.base/java/util/Queue.html>

<https://formal.iti.kit.edu/~beckert/teaching/Verification-SS06/10OCL.pdf>

<https://slideplayer.com/slide/6911064/>

<http://home.agh.edu.pl/~regulski/psk/cw/wykladocl.pdf>