

## Esercizio “FIFO”

Scrivere una classe che (Utilizzando la classe `Nodo<E>` e una struttura di memorizzazione dinamica) fornisca i servizi di una struttura dati FIFO come di seguito descritti.

Le descrizioni si riferiscono alle interfacce `Queue` e `Collection` della distribuzione standard Java.

I metodi in rosso NON sono richiesti.

Method Summary	
boolean	<a href="#">add</a> ( <a href="#">E</a> e) Inserts the specified element into this queue if it is possible to do so immediately without violating capacity restrictions, returning <code>true</code> upon success and throwing an <code>IllegalStateException</code> if no space is currently available.
<a href="#">E</a>	<a href="#">element</a> () Retrieves, but does not remove, the head of this queue.
boolean	<a href="#">offer</a> ( <a href="#">E</a> e) Inserts the specified element into this queue if it is possible to do so immediately without violating capacity restrictions.
<a href="#">E</a>	<a href="#">peek</a> () Retrieves, but does not remove, the head of this queue, or returns <code>null</code> if this queue is empty.
<a href="#">E</a>	<a href="#">poll</a> () Retrieves and removes the head of this queue, or returns <code>null</code> if this queue is empty.
<a href="#">E</a>	<a href="#">remove</a> () Retrieves and removes the head of this queue.

Method Summary	
boolean	<a href="#">add</a> ( <a href="#">E</a> e) Ensures that this collection contains the specified element (optional operation).
boolean	<a href="#">addAll</a> ( <a href="#">Collection</a> <? extends <a href="#">E</a> > c) Adds all of the elements in the specified collection to this collection (optional operation).
void	<a href="#">clear</a> () Removes all of the elements from this collection (optional operation).
boolean	<a href="#">contains</a> ( <a href="#">Object</a> o) Returns <code>true</code> if this collection contains the specified element.
boolean	<a href="#">containsAll</a> ( <a href="#">Collection</a> <?> c) Returns <code>true</code> if this collection contains all of the elements in the specified collection.
boolean	<a href="#">equals</a> ( <a href="#">Object</a> o) Compares the specified object with this collection for equality.
int	<a href="#">hashCode</a> () Returns the hash code value for this collection.
boolean	<a href="#">isEmpty</a> ()

	Returns <code>true</code> if this collection contains no elements.
<code>Iterator&lt;E&gt;</code>	<code>iterator()</code> Returns an iterator over the elements in this collection.
<code>boolean</code>	<code>remove(Object o)</code> Removes a single instance of the specified element from this collection, if it is present (optional operation).
<code>boolean</code>	<code>removeAll(Collection&lt;?&gt; c)</code> Removes all of this collection's elements that are also contained in the specified collection (optional operation).
<code>boolean</code>	<code>retainAll(Collection&lt;?&gt; c)</code> Retains only the elements in this collection that are contained in the specified collection (optional operation).
<code>int</code>	<code>size()</code> Returns the number of elements in this collection.
<code>Object[]</code>	<code>toArray()</code> Returns an array containing all of the elements in this collection.
<code>&lt;T&gt; T[]</code>	<code>toArray(T[] a)</code> Returns an array containing all of the elements in this collection; the runtime type of the returned array is that of the specified array.