

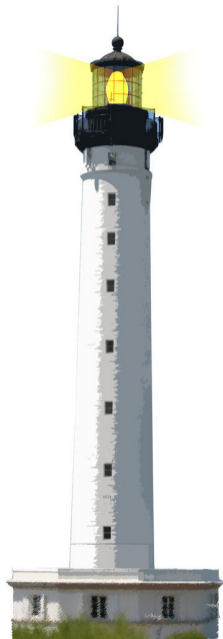
Stream Overview

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<http://www.pharo.org>



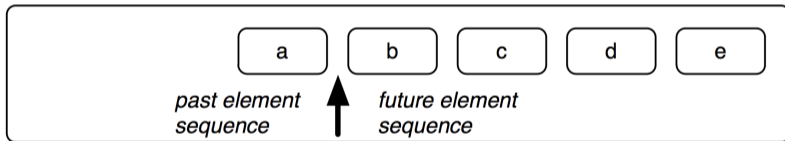
What You Will Learn

- What streams are?
- How to use them



Streams

- Iterate over a sequence of elements
 - e.g., collection, file, network
- Current position separates past from future



API Overview

- **Creating**
 - anObject readStream
 - anObject writeStream
 - Collection streamContents: [:stream | ...]
 - (Read/Write)Stream on: aCollection
- **Reading elements**
 - next
 - upTo: anObject
 - upToEnd
- **Writing elements**
 - nextPut: anElement
 - nextPutAll: aCollection



Reading Elements

- next, upTo: anObject, upToEnd

```
| stream |  
stream := #($a $b $c $d $e $f) readStream.
```

```
stream next.  
> $a
```

```
stream upTo: $d.  
> #($b $c)
```

```
stream position.  
> 4
```

```
stream upToEnd  
> #($e $f)
```



Writing Elements

- nextPut:, nextPutAll:

```
stream := (Array new: 6) writeStream.
```

```
stream nextPut: 1.
```

```
stream contents.
```

```
> #(1)
```

```
stream nextPutAll: #(4 8 2 6 7).
```

```
stream contents.
```

```
> #(1 4 8 2 6 7)
```



Writing to a File

```
stream := 'hello.txt' asFileReference writeStream.  
stream nextPutAll: 'Hello Pharo!'.  
stream close.
```

Reading from a File

```
stream := 'hello.txt' asFileReference readStream.
```

```
stream next.
```

```
> $H
```

```
stream upToEnd.
```

```
> 'ello Pharo!'
```

```
stream close
```



Creating Collections from a Stream

When you want to create a collection by writing to a stream:

```
stream := OrderedCollection new writeStream.  
stream nextPut: 1.  
stream contents
```

is equivalent to

```
OrderedCollection  
streamContents: [:stream | stream nextPut: 1]
```

Both scripts return a collection with number 1 inside.

What You Should Know

- A stream can read from and write to
 - collections, files and network
- A stream maintains a current position
- A stream can help create collections



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