

```

public Object nextElement()
{
    if(count == 0)
        throw new NoSuchElementException();
    else
    {
        count--;
        return elements[count];
    }
}
}
}

```

The inner class `Enumerator` within `Stack` uses the fields `elements` and `top` from `Stack`. These refer to the fields within the object that created the `Enumerator`.

To support these, the translation includes a reference to the enclosing object, called `this$0`. It is initialized in the constructor to the object responsible for the creation of the `Enumerator`. All references to `top` and `elements` come from this reference.

The compilation of `Enumerator` produces these definitions:

```

.class Stack$Enumerator
.implements java/util/Enumeration

.field this$0 LStack;           ; The enclosing object
.field count I                  ; The current count

.method <init>(LStack;)V
  aload_0                       ; Call super constructor
  invokespecial java/lang/Object/<init>()V
  aload_0                       ; Store the enclosing object
  aload_1                       ; in this$0
  putfield data/structure/Stack$Enumerator/this$0 LStack;

  aload_0                       ; This is the body of the
  aload_1                       ; constructor:
  getfield Stack/top I          ; count = top;
  putfield count I

return
.end method

```