Assignment 7: SCOOP type system

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1 Basic library: type combiner

1.1 Background
Consider the classes in listing 1. These classes belong to a basic library implementation.

Listing 1: Basic Library

```
class LIST[G]
   feature
      last : G  -- Last element.
   end

   put(a_element: G)  -- Add the element to the list.
   do
      ...
   end
end
```

```
class LIBRARY
   feature
   end
```

1.2 Task
What is the result type of `books.last` from the perspective of the library? What is the type of an actual argument in the call `books.put(...)` from the perspective of the library? Justify your answer.

2 Stack library: type combiner

2.1 Background
Consider the alternative stack based library implementation shown in listing 2.

Listing 2: Stack Library

```
class LIST[G]
   feature
      last : G  -- Last element.
   end
```
2.2 Task

What is the result type of `books.last.top` from the perspective of the library? Justify your answer.