

# Project in Object oriented Programming

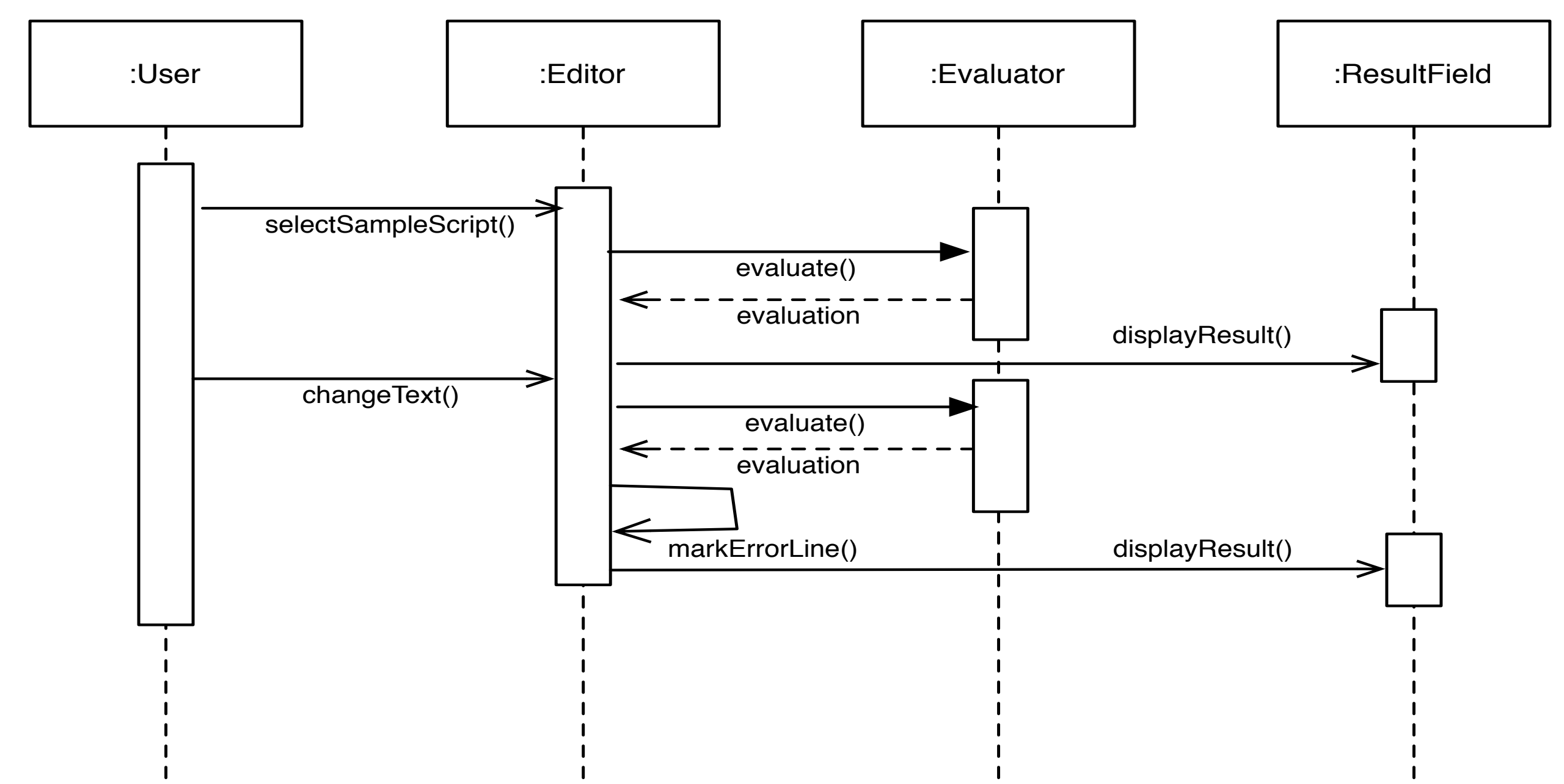
## requirements

- embeddable text editor
- support different syntax specifications (Tcl, XOTcl, NX)
- supply of sample scripts
- evaluation of submitted code
- output of executed code
- tagging of error line in the editor



source: <http://try.dartlang.org>

typical scenario



This sequence diagram shows a typical use case for this editor, where a user selects a sample script, modifies and evaluates the code.

## implemented highlighting features

Tcl - commands	✓
string areas	✓
comments	✓
line breaks	✓
variables	✓
special characters	✓
highlighting of special commands	✓
namespaces	✓
highlighting of within string areas	✗

```
1 #comment \  
2   comment line 2  
3  
4 set variable "string  
5   area"  
6  
7 test instproc testproc{} {  
8   puts ${:variable}  
9   puts "$variable"  
10 }  
11  
12 puts \  
13   $variable  
14  
15 namespace::command  
16  
17 {*}  
18
```

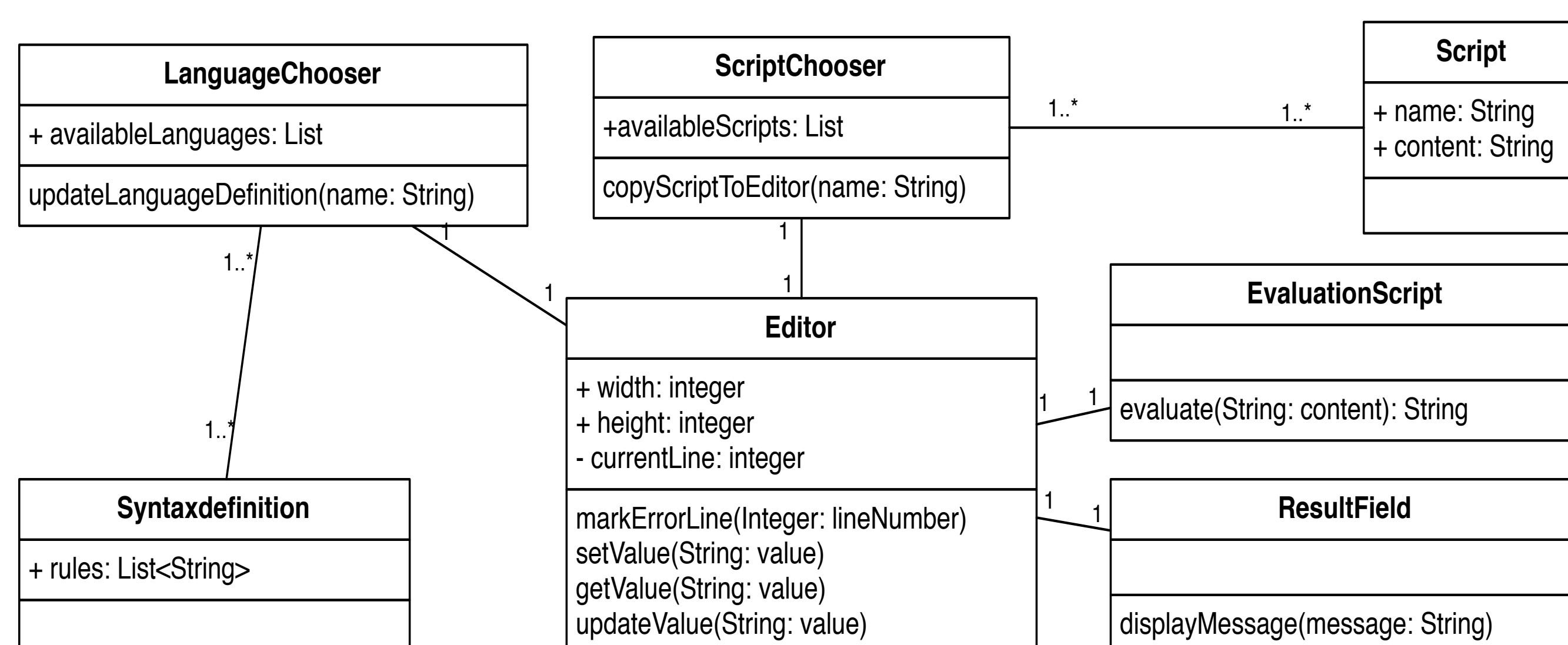
## evaluation of the code

- execution in a child interpreter in safe mode
- special handling of put statements to the command line in order to return them to the browser
- identification and transmission of error lines in the script

## lessons learned

- Tcl syntax has a very simple structure
- syntax definitions based on regular expressions often have unwanted side effects
- there is no accurate syntax specification of Tcl or XOTcl with regard to syntax highlighting
- features praised in the documentation of open source projects seldom work as expected

## architecture of the editor



Based on the functionality of the Editor Ace, the additional functionality like the sample scripts and the code evaluation were implemented. The syntax definitions for Tcl, XOTcl and NX extend the default text syntax highlighting.

## benefits

- editor and evaluation can be used on any computer
- no setup required for students for subjects
- can be used as a show case on <http://next-scripting.org>
- can be used as a paste environment to share code snippets

## further work

- collaboration on projects
- monitoring and evaluation of actual usage of language features
- easy sharing of code snippets

## Implementation

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