ST/X Libjava

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What is STX:LIBJAVA

A Java implementation for Smalltalk/X VM

What does it mean?

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Smalltalk/X

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- Fast smalltalk implementation
- VM written in C, including JIT
- Support for Ruby, Javascript, XQuery, Pascal

STX:LIBJAVA

Why yet another language?

- different approach

stx:libJava

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- possibility to reuse existing code

STX:LIBJAVA

Why yet another language?

- different approach
- possibility to reuse existing code
- interoperability research

How it works?

- loads Java `.class` files

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- executes Java bytecodes (no translation)

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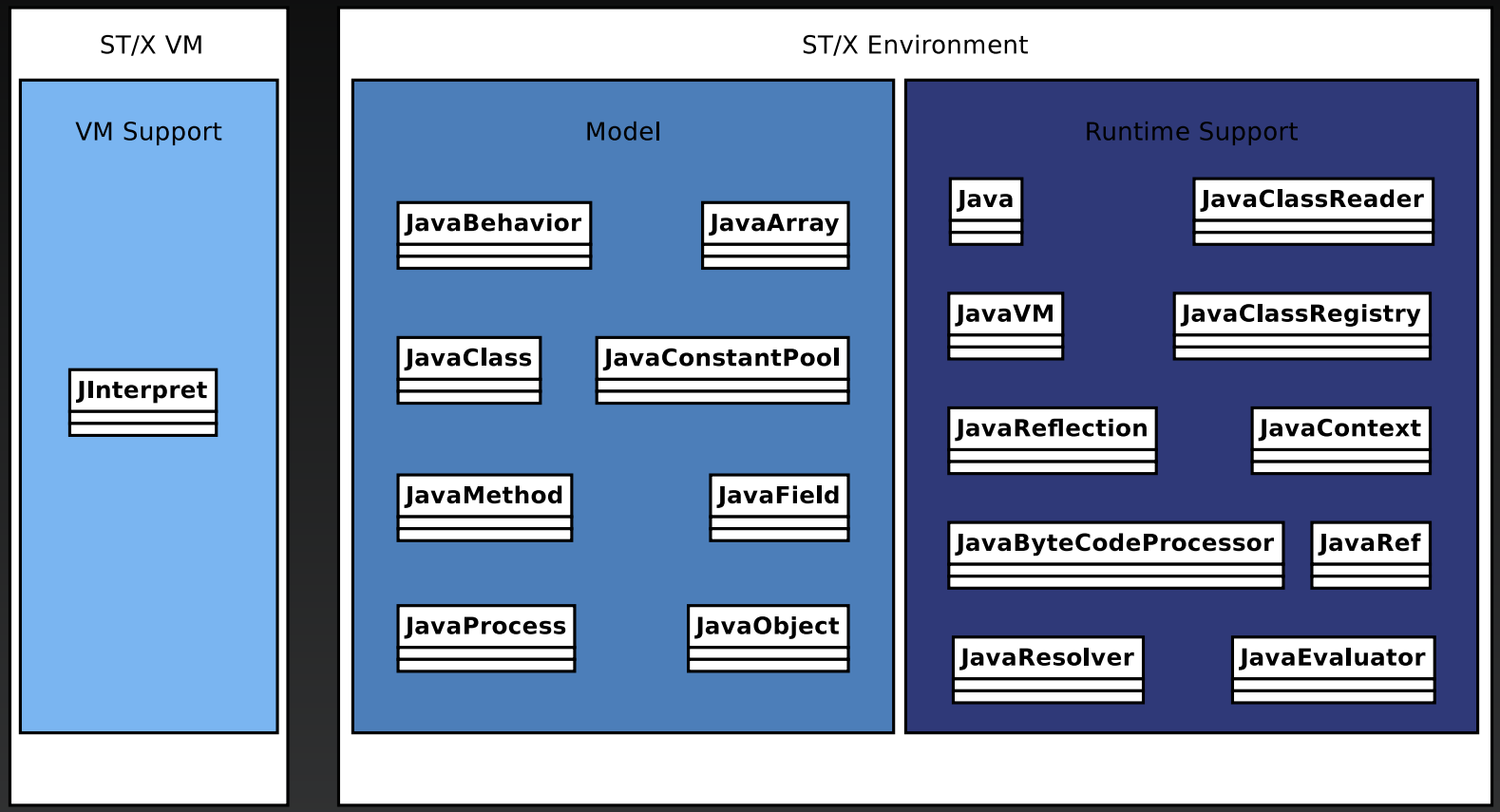
- loads Java `.class` files
- executes Java bytecodes (no translation)
- no difference between Java and Smalltalk objects

High level overview



Obstacles on the way

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- Class Loaders

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- Synchronization

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- Exceptions

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- Class Loaders
- Synchronization
- Exceptions
- finally

Hands on - JUnit

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```
public class JUnit4Tests {

    @Test
    public void helloWorld() {
        assertEquals("Is zero equal 5-5 test",0, (5-5));
    }

    @Test
    public void
        assertEq
    }

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        Result r
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    }
```

Workspace3

File Buffers Edit View Bookmarks Execute Workspace Smalltalk ?

MyWorkspace | Workspace2 | Workspace3

```
1  Java addToClassPath: '/home/m/Projects/libjava/tests/libjava/'.
2  Java classForName: 'stx.libjava.tests/JUnit4Tests'.
3      "--> stx.libjava.tests.JUnit4Tests"
4  (Java classForName: 'stx.libjava.tests/JUnit4Tests')
5      performStatic: #'main([Ljava/lang/String;)V' with: nil.
6      "-->
7  Expected output: 3 run, 1 failed
8  getRunCount() = 3
9  getFailureCount() = 1
10 "
```

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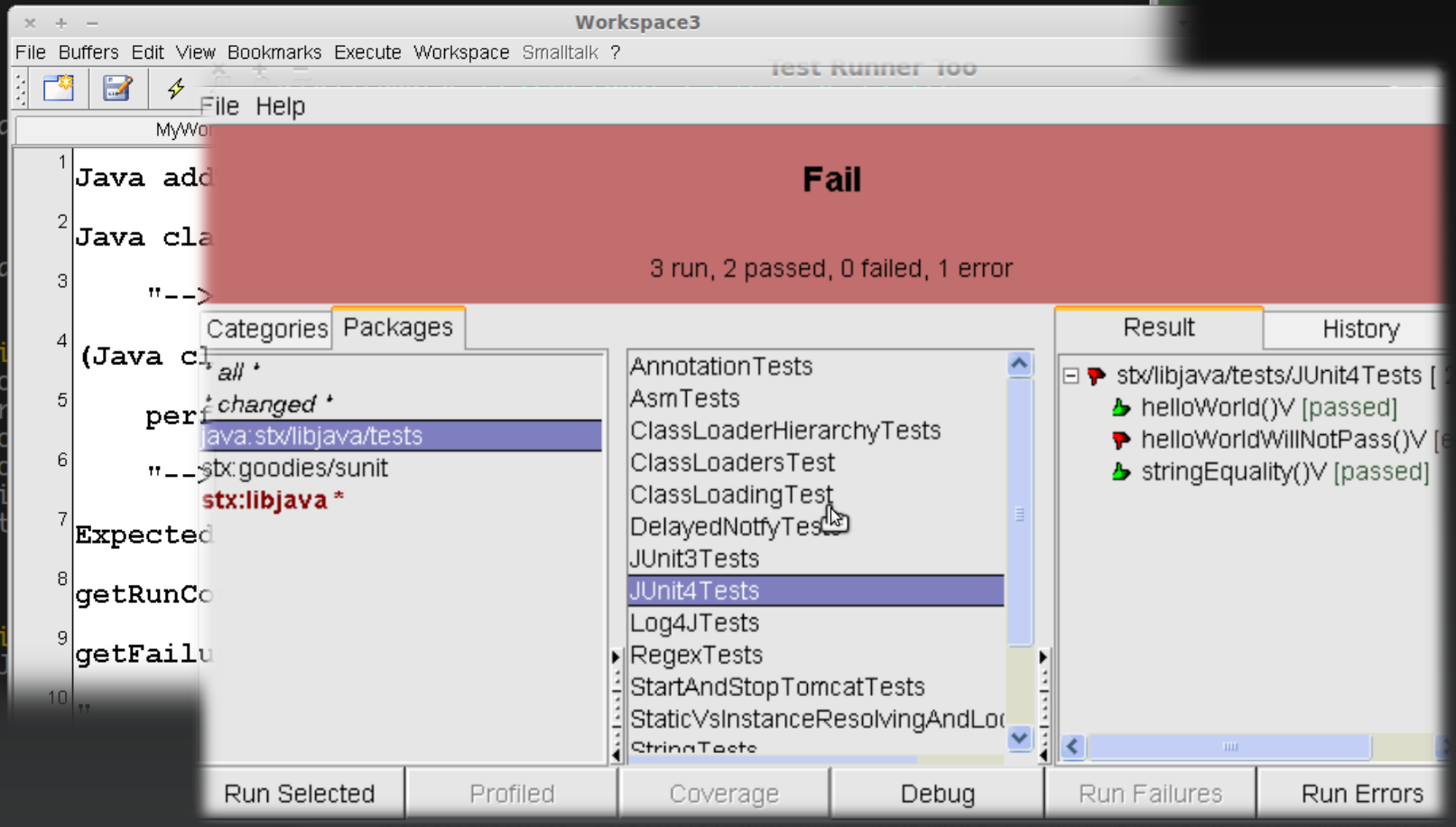

Hands on - Groovy

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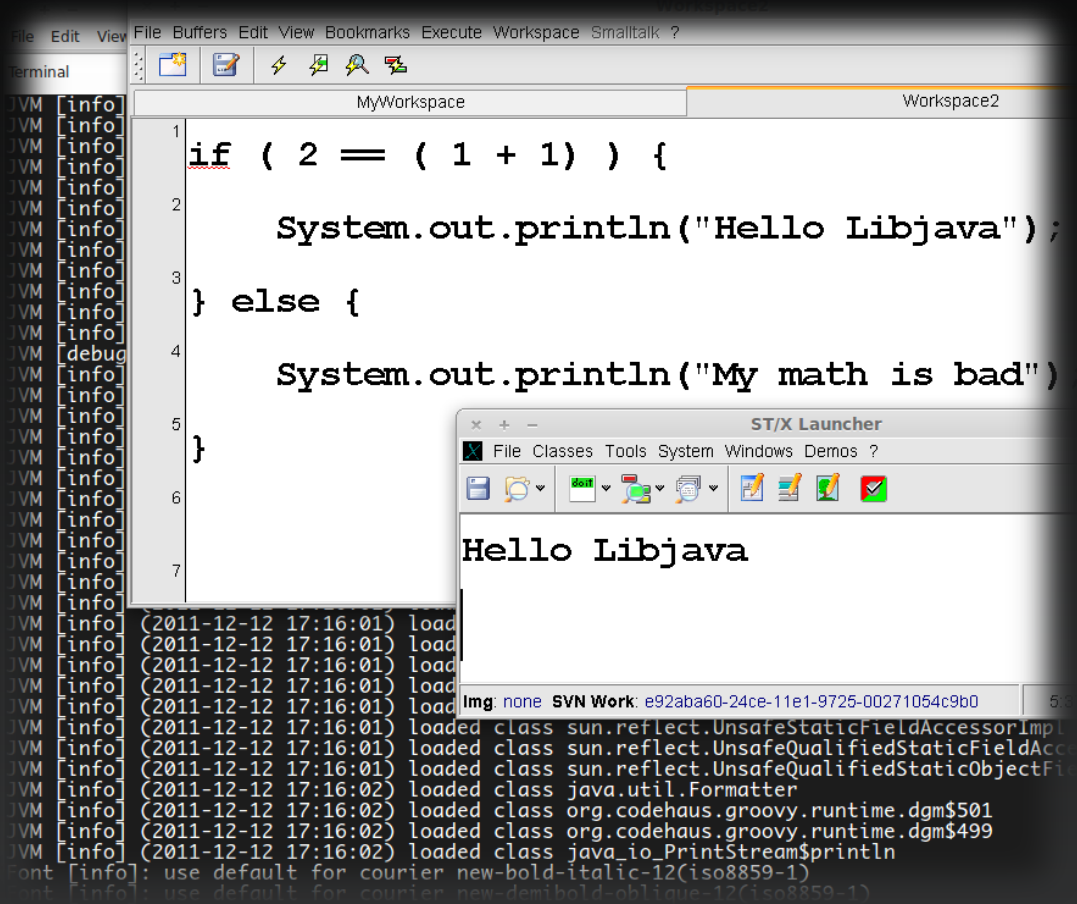

Hands on - Tomcat

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Future work

- JIT

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- Integration

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- Incremental compiler

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but mostly

interoperability

Questions

Q & A