



Freie Universität Berlin

MyCourses

A Course Scheduling System

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Development
process

bloc622

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Automatic Code
Generation

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CGU6L310U

MyCourses

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Q & A

bloc622

REGISTRATION

At the moment

I have no idea

how to depict

our development process

in 2 slides

or, well...

at all.

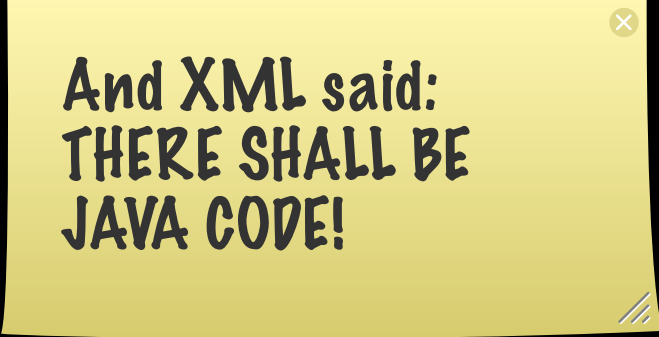
Code generation

In the beginning, our codebase was vast and void, and darkness was over the surface of the watery deep. but the spirit of XML was moving over the surface of the water.

The XML logo consists of a solid blue square with the letters "XML" in white, sans-serif font centered within it.

XML

Code generation



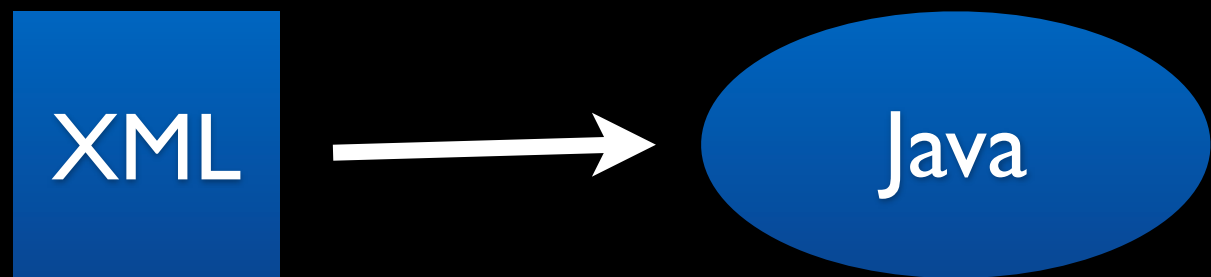
And XML said:
THERE SHALL BE
JAVA CODE!



XML

Code generation

And XML said:
THERE SHALL BE
JAVA CODE!



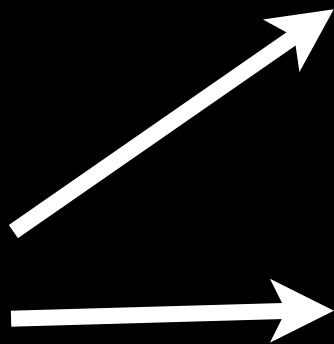
Code generation

And XML said:
THERE SHALL BE
JAVA CODE!

Database

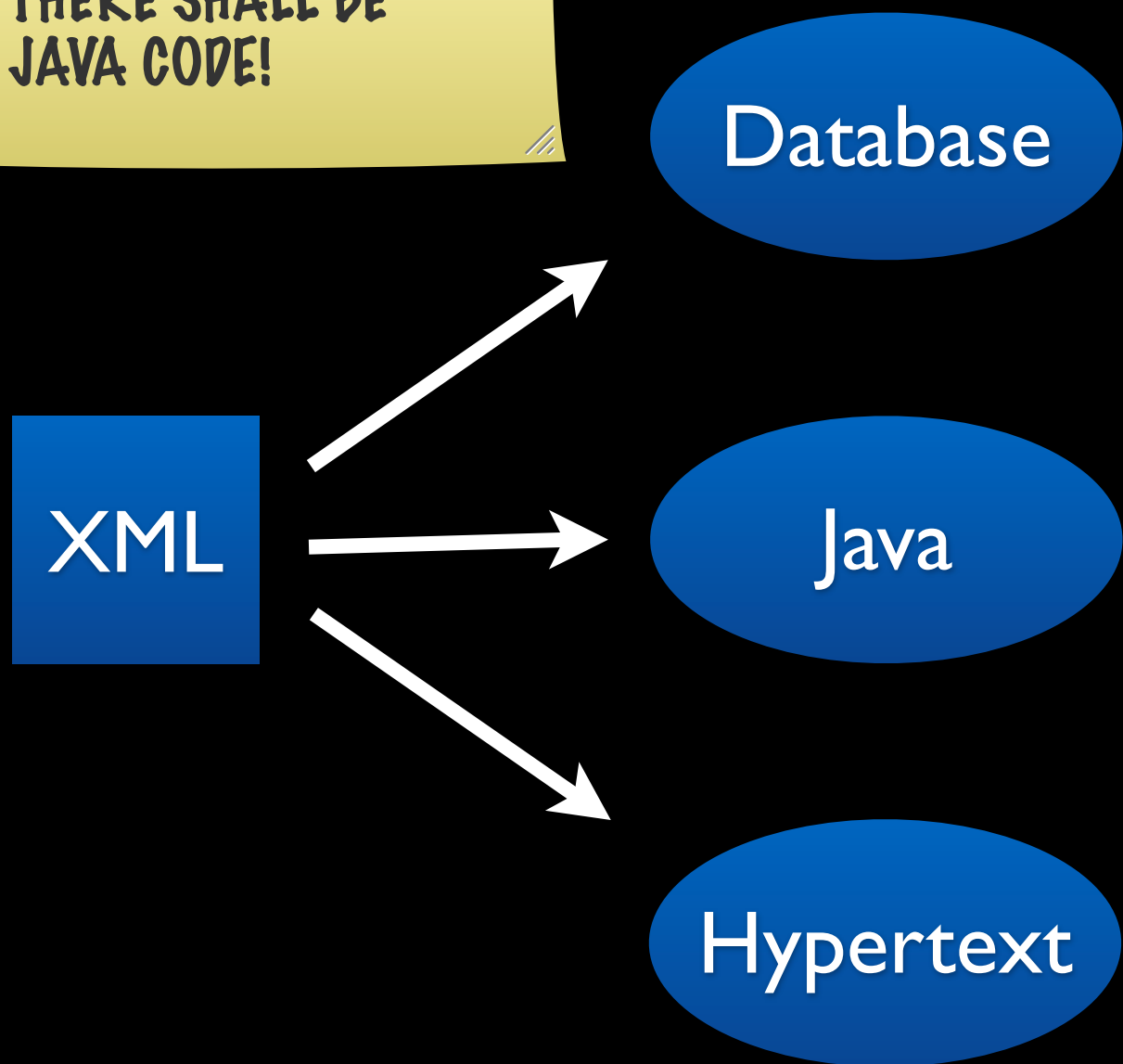
XML

Java



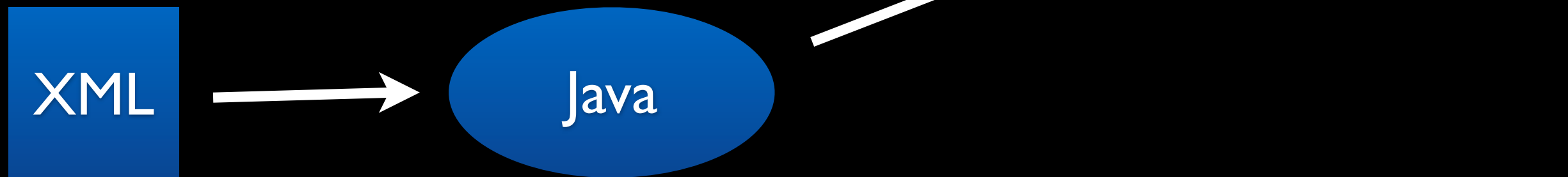
Code generation

And XML said:
THERE SHALL BE
JAVA CODE!



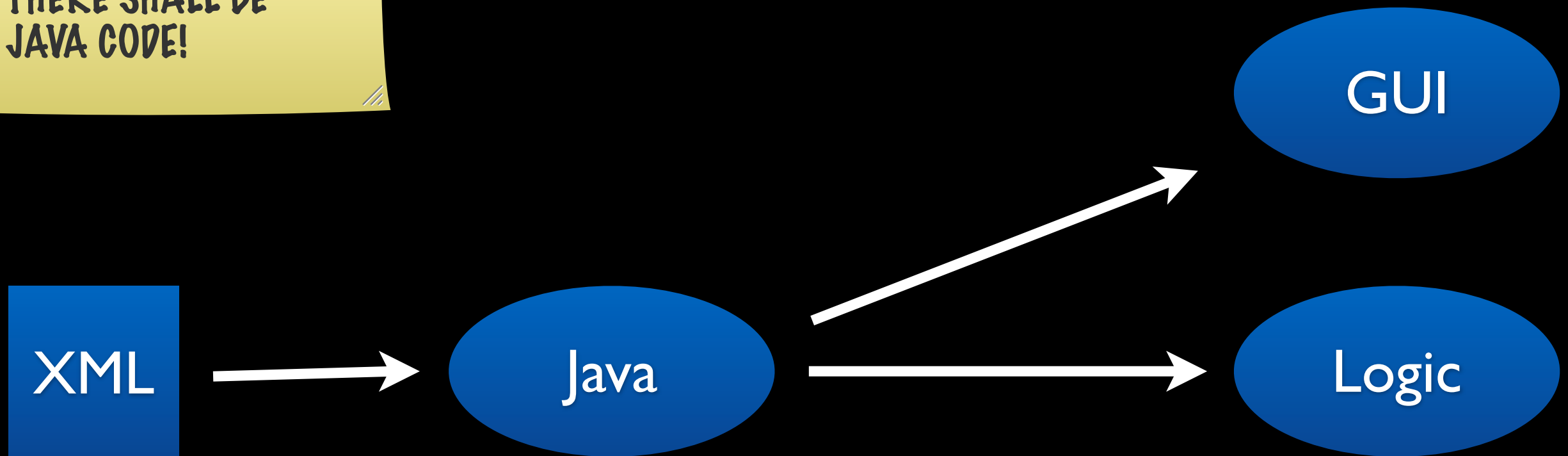
Code generation

And XML said:
THERE SHALL BE
JAVA CODE!



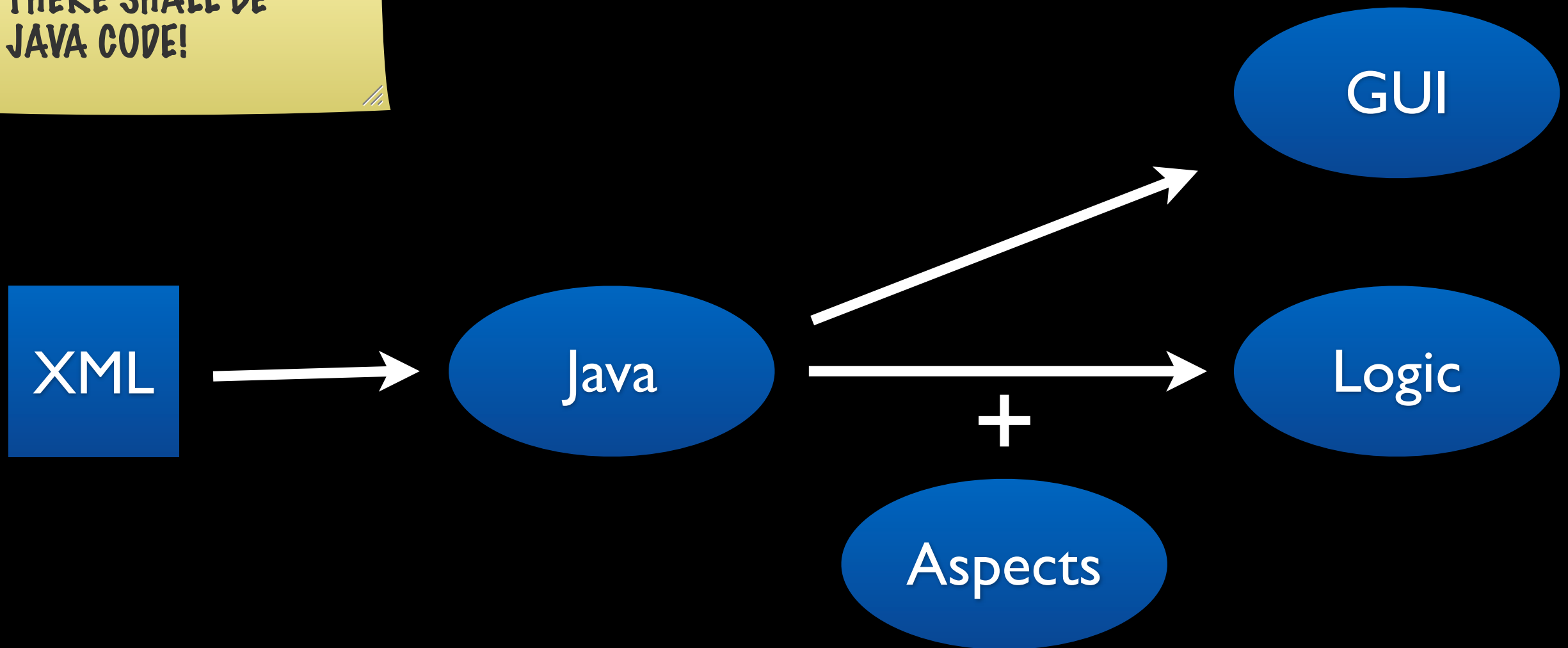
Code generation

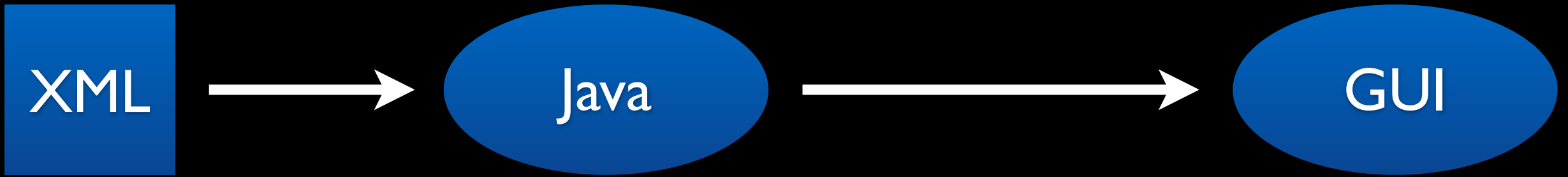
And XML said:
THERE SHALL BE
JAVA CODE!

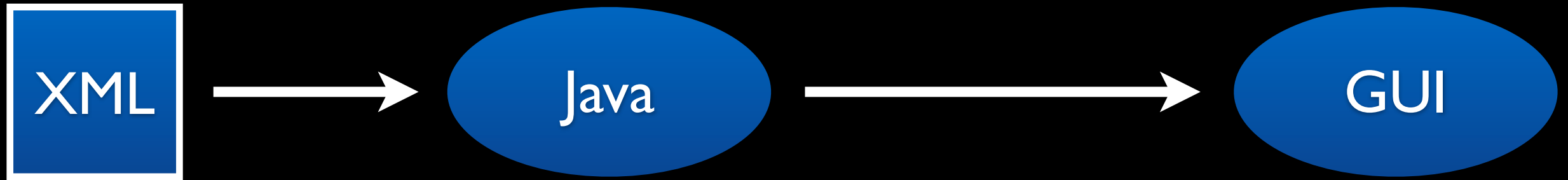


Code generation

And XML said:
THERE SHALL BE
JAVA CODE!





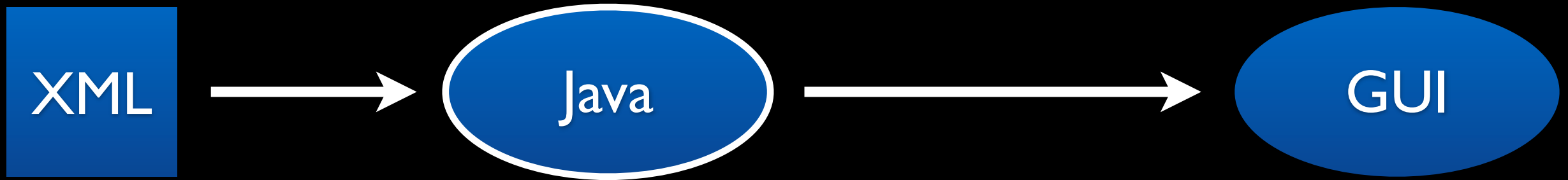


```
<entity name="Person">
  <attribute name="first_name"
    type="string" />

  <attribute name="last_name"
    type="string" />

  <attribute name="login_name"
    match="[a-z][a-z0-9]+"
    type="string"
    unique="true"
    nullable="false" />

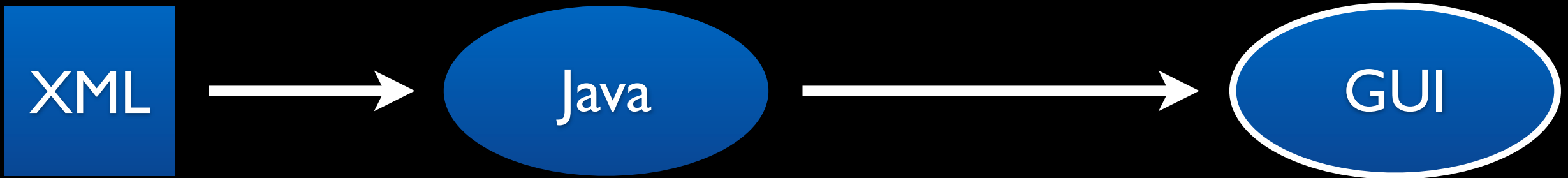
  <attribute name="home_department"
    ref="Department"
    nullable="true" />
</entity>
```

```
@Entity(name = "Person")
public class Person {
    public class Form {
        @Required
        public String firstName;

        @Required
        public String lastName;

        @Required @Min(3) @Max(40)
        @Match("[a-z][a-z0-9]+")
        public String loginName;
    }
}
```

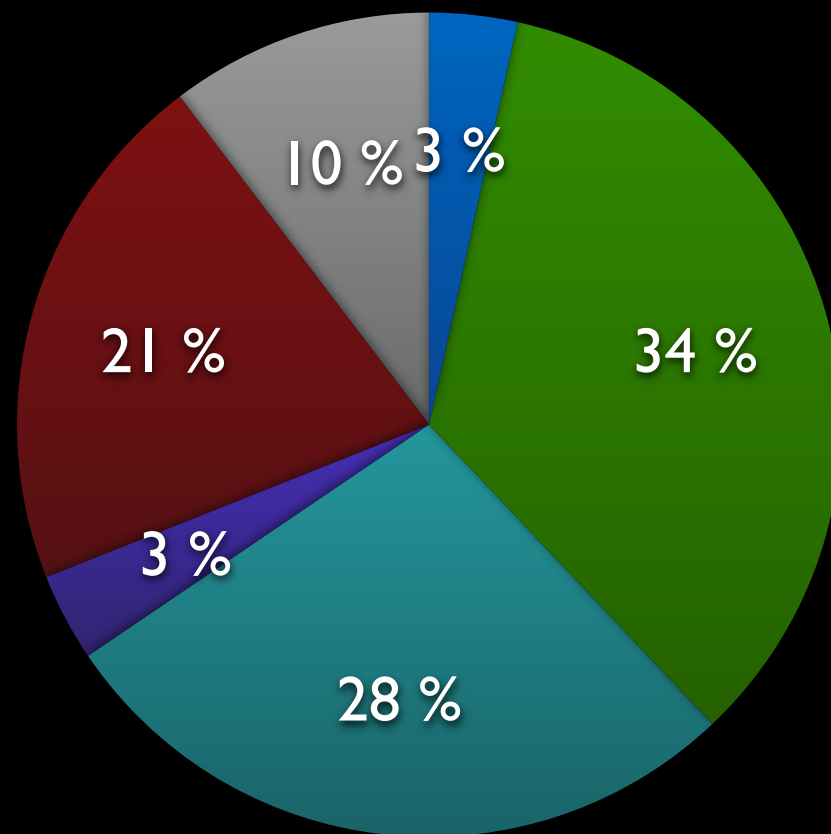


Create a new user account

First name:	<input type="text"/>	required, but missing
Additional name(s):	<input type="text"/>	
Last name:	<input type="text"/>	required, but missing
Email address:	<input type="text"/>	
Login credentials		
Login name:	<input type="text" value="as"/>	invalid (tooShort)
Password:	<input type="password"/>	required, but missing
Administrative stuff		
Home department:	<input type="text"/>	The home department of a user is the department where she/he is allowed to enroll or to teach (however, optional).
Current Year:	<div>Economics English Chemistry</div>	
Privileges & Roles		
Superuser rights:	<div>Chemistry English Economics</div>	

Q & A

The intent of this slide is to lead from auto generated code (bullet-proof) to “better code quality” -> essential means of quality assurance (since the “human error factor” is reduced)



- XML
- Java (auto generated)
- Java (hand written)
- Aspects
- XSL (web interface / view)
- XSL (used for code generation)

- Use Cases
- Benchmarks
(Query-Cache)
- Tools:
Unit Tests, Profiler,
Code Coverage Analyser

Thank you!

Any Questions?

Thank you!

