



Freie Universität Berlin

MyCourses

A Course Scheduling System

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Development
process

bloc622

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Development
process

Code generation

bloc622

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A Course Scheduling System

Development
process

Code generation

Quality assurance

bloc622

Development process

Incremental

Iterative

Regular meetings

Intended

Actual

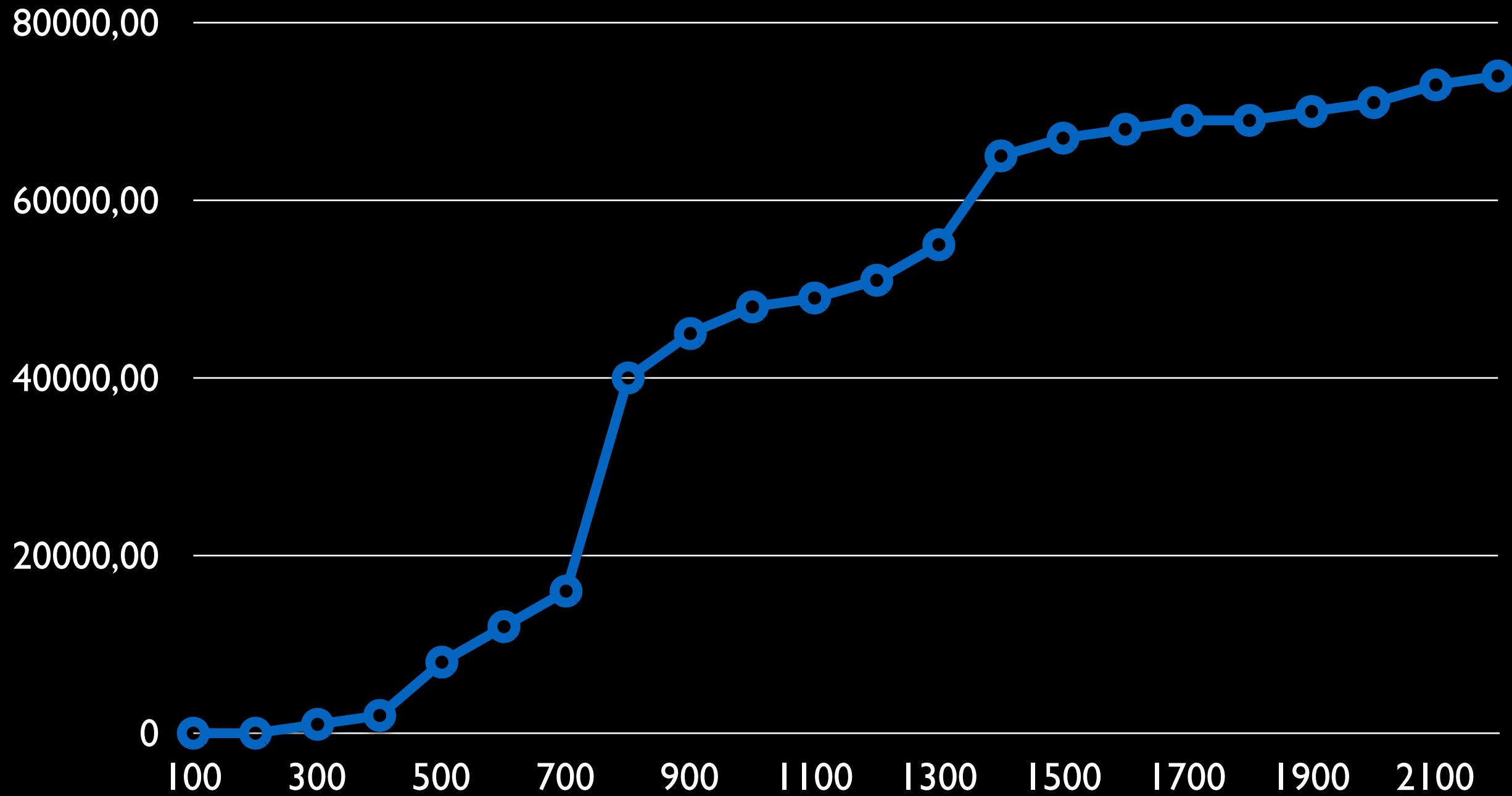
Risk
Management

Iterative
Development

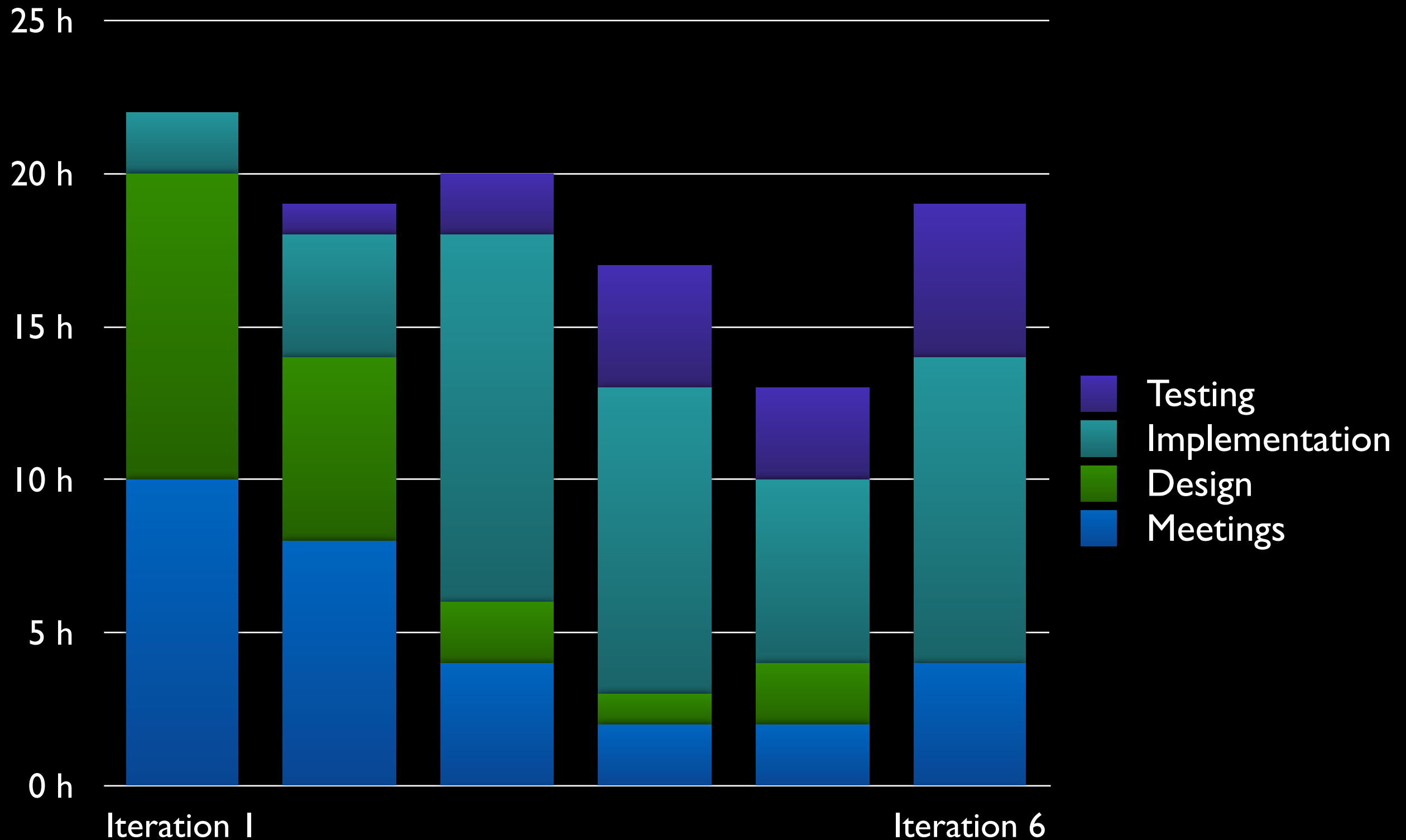
Regular
Meetings

Iterative
Development

Lines of Code per Revision



Hours devoted to the project / per person, per week



Code generation

Code generation

Relational model

first_name	last_name	login

Code generation

Object oriented model

Person
+ firstName + lastName + login
+ delete() : boolean + pushChanges() : boolean + insert() : boolean

Relational model

first_name	last_name	login

Code generation

Object oriented model

Person
+ firstName + lastName + login
+ delete() : boolean + pushChanges() : boolean + insert() : boolean



XML



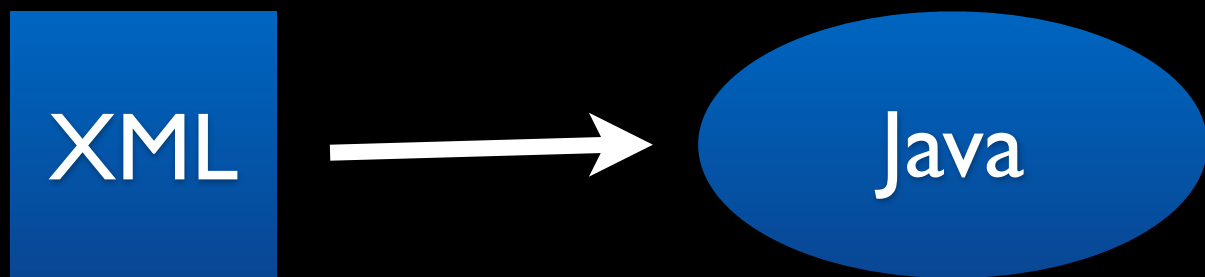
Relational model

first_name	last_name	login

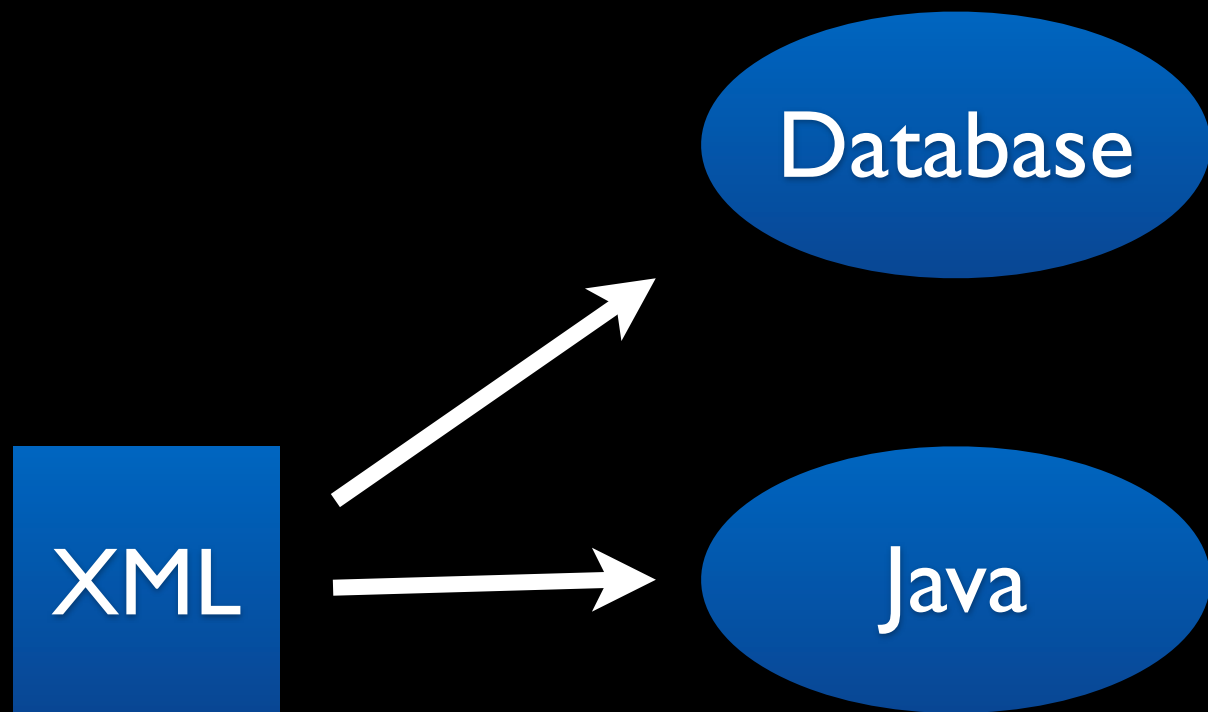
Code generation



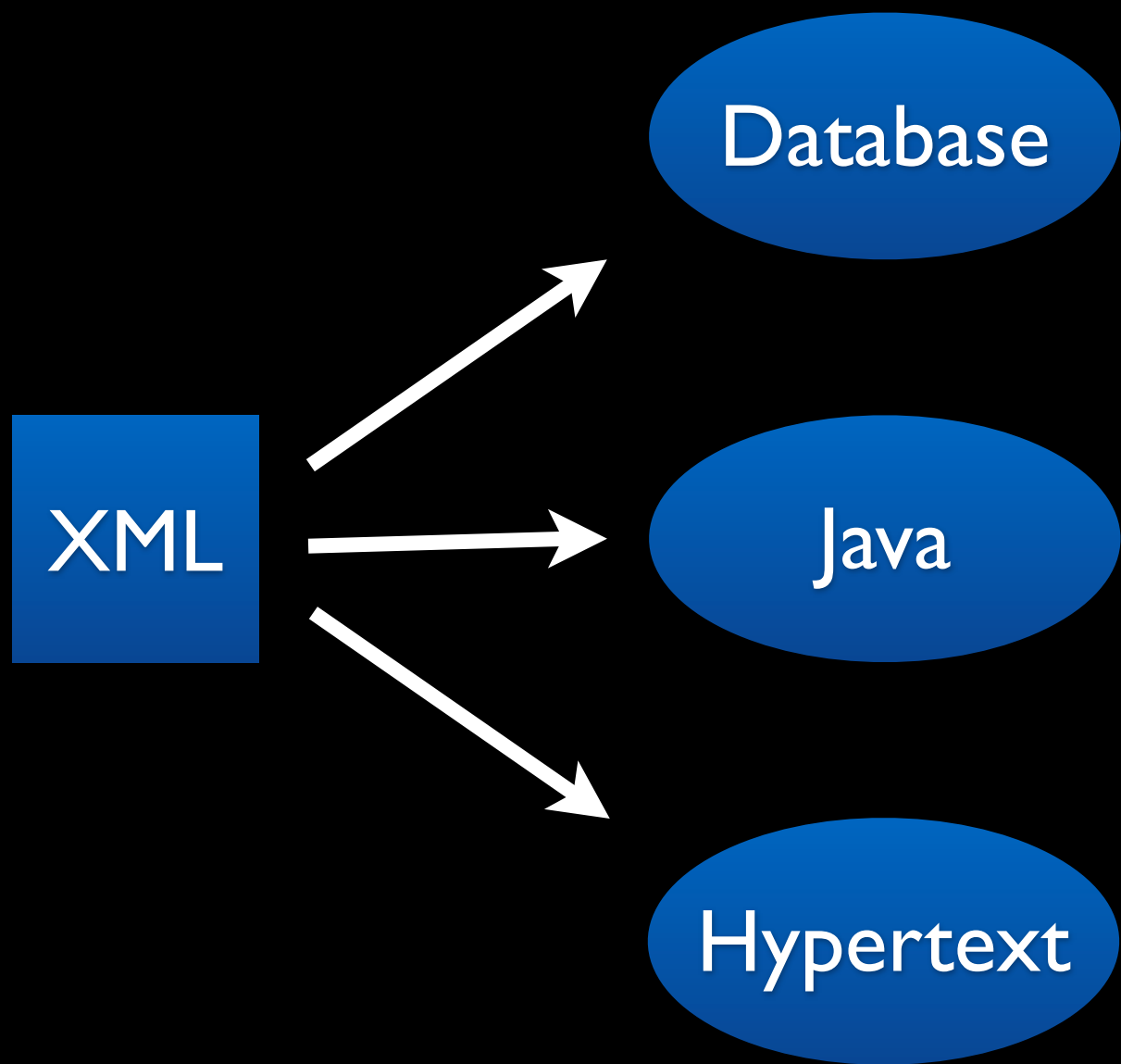
Code generation



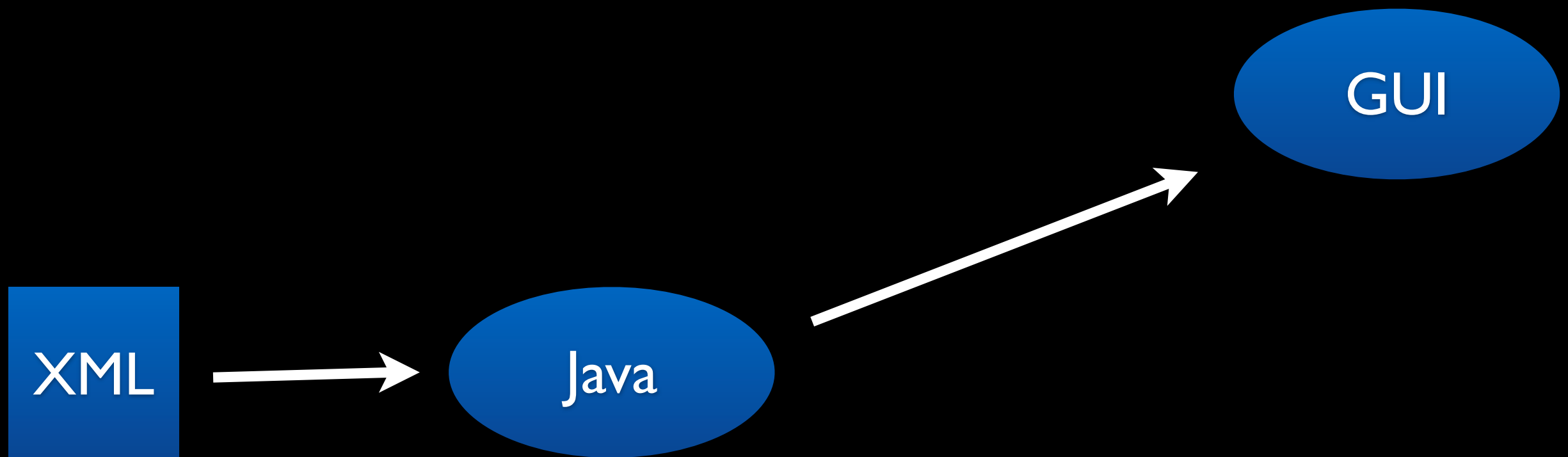
Code generation



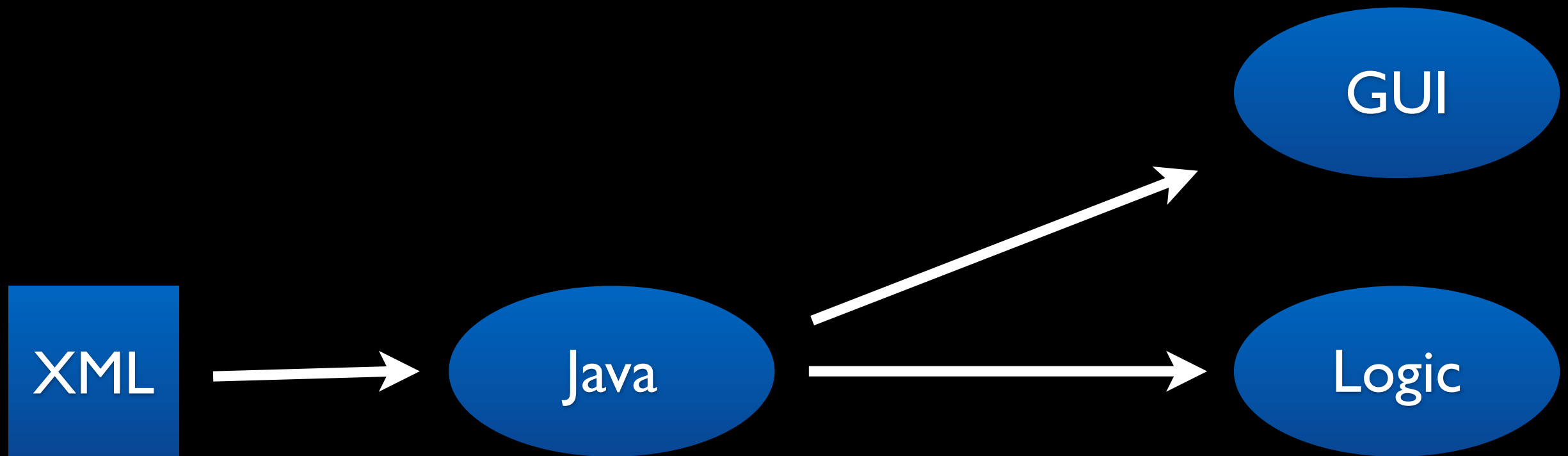
Code generation



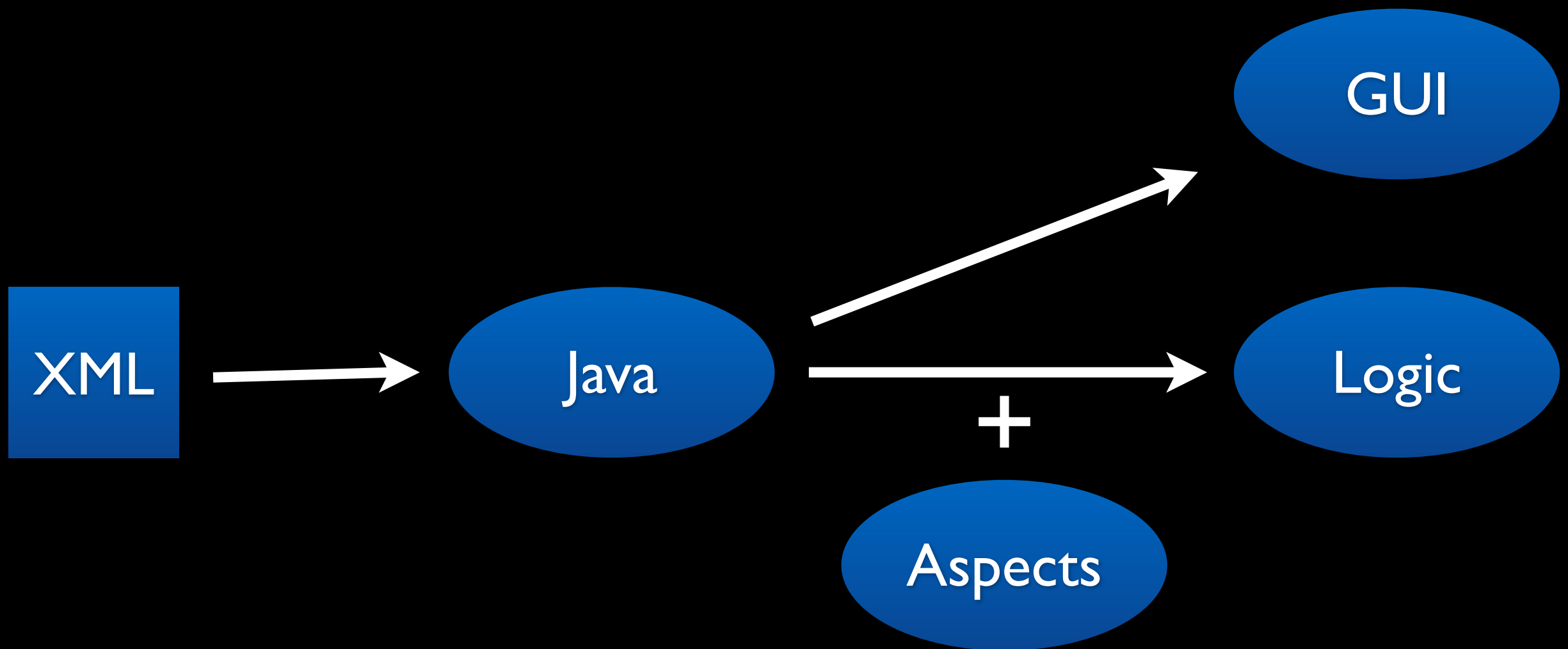
Code generation

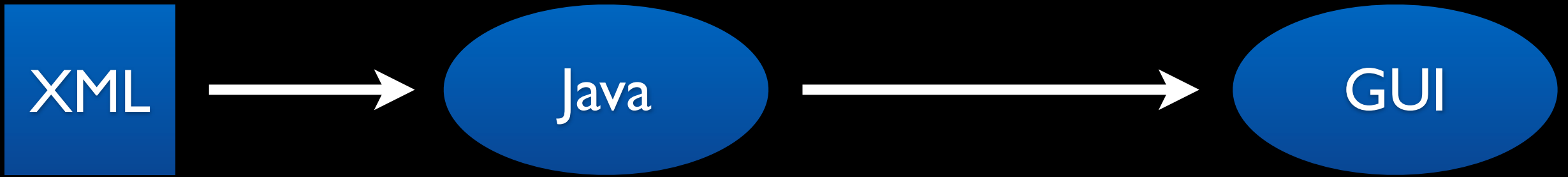


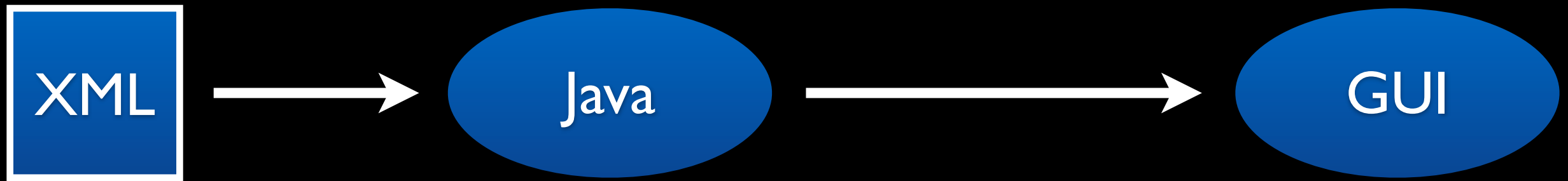
Code generation



Code generation







```
<entity name="Person">
```

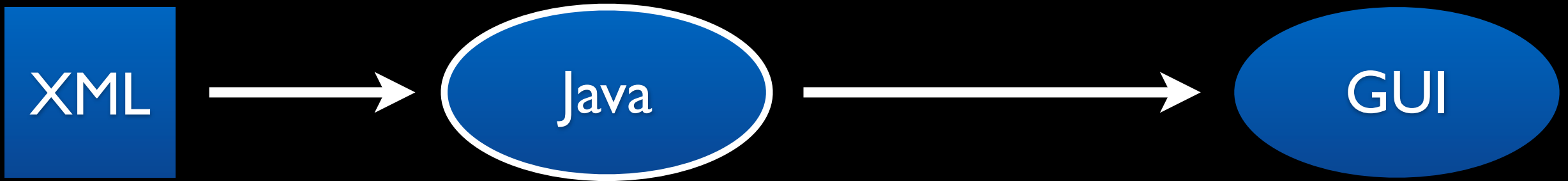
```
  <attribute name="first_name"  
    type="string" />
```

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

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

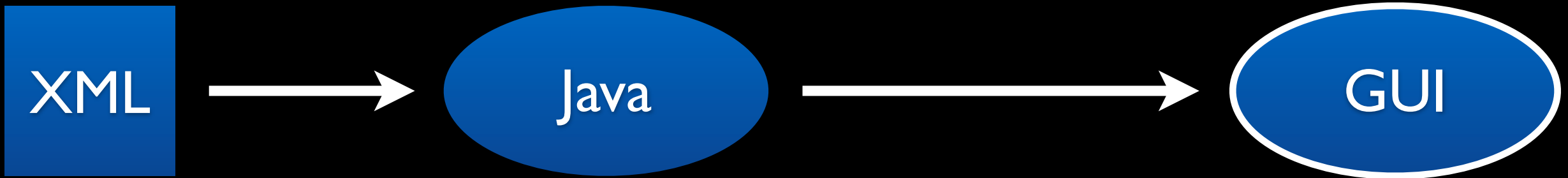
```
  <attribute name="home_department"  
    ref="Department"  
    nullable="true" />
```

```
</entity>
```



```

<entity name="Person" @Entity(name = "Person")
  <attribute name="firstName" type="string" /> public class Person {
    @Required
    public String firstName;
  }
  <attribute name="lastName" type="string" /> @Required
    public String lastName;
  <attribute name="loginName" match="[a-z][a-z0-9]+" type="string"
    unique="true" nullable="false" /> @Required @Min(3) @Max(40)
    @Match("[a-z][a-z0-9]+")
    public String loginName;
  <attribute name="homeDepartment" ref="Department" nullable="true" />
    public Department homeDepartment;
</entity>
  
```



<entity name="Person">

<attribute name="first_name"
type="string"

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

<attribute name="login_name"
match="[a-z]"
type="string"
unique="true"
nullable="false"

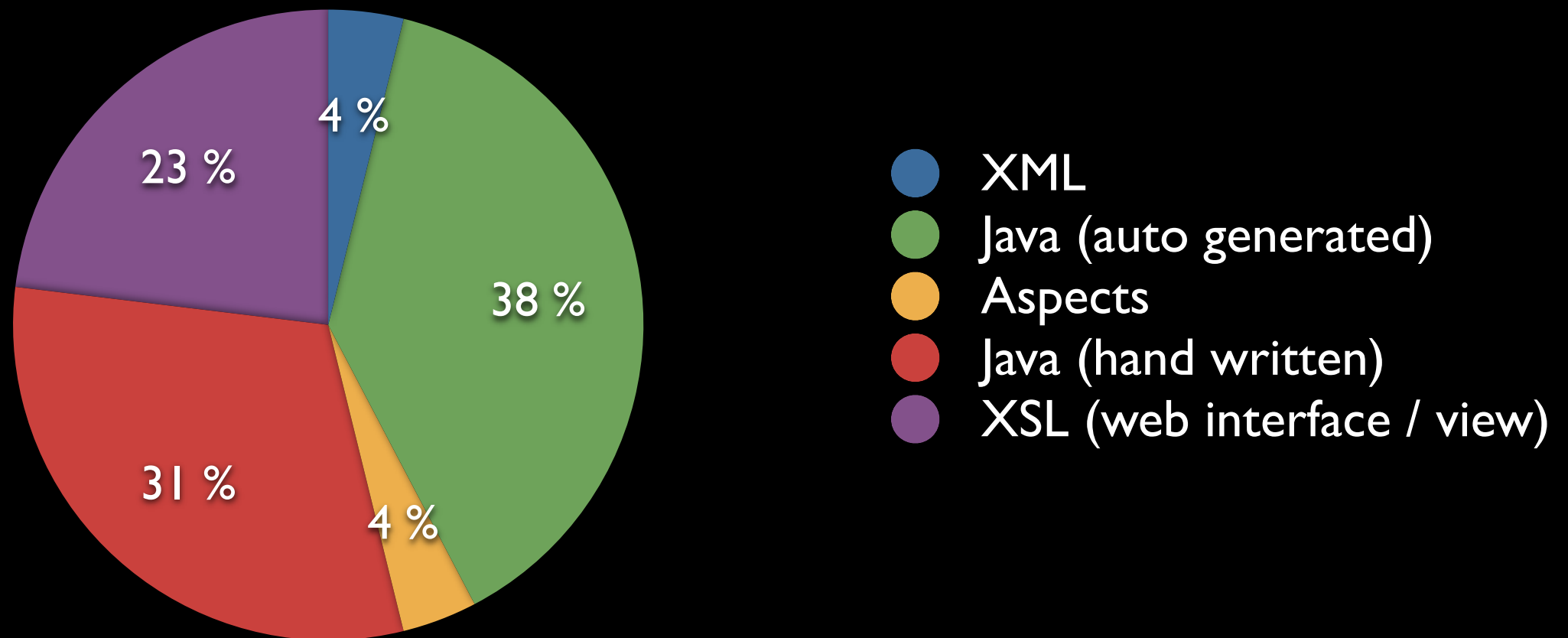
<attribute name="home_dept"
ref="Department"
nullable="true" />

</entity>

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:	<input type="checkbox"/>	

Quality assurance



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

Thank you!

Any Questions?

Thank you!

