

AN ALTERNATIVE ALT.NET

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factor10

About Jimmy Nilsson

Primarily a developer/architect

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Author of "*Applying Domain-Driven Design and Patterns*" and "*.NET Enterprise Design*"

Co-founder and CEO of factor10

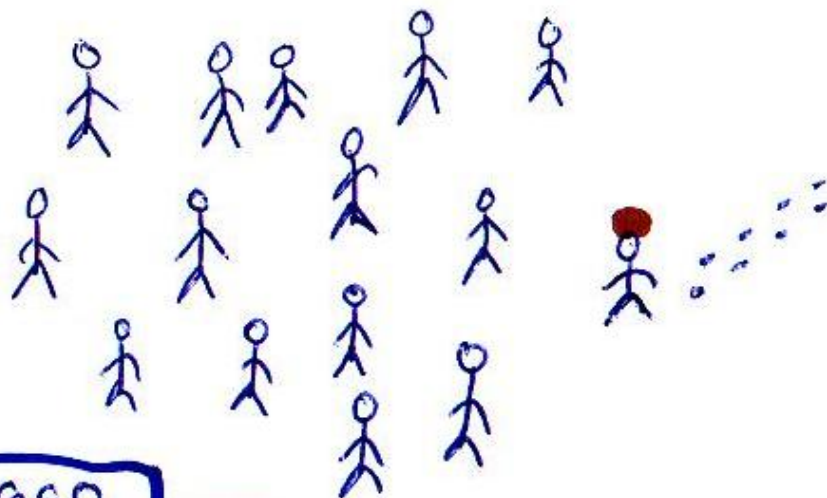


The MSDN way

One Big Vendor

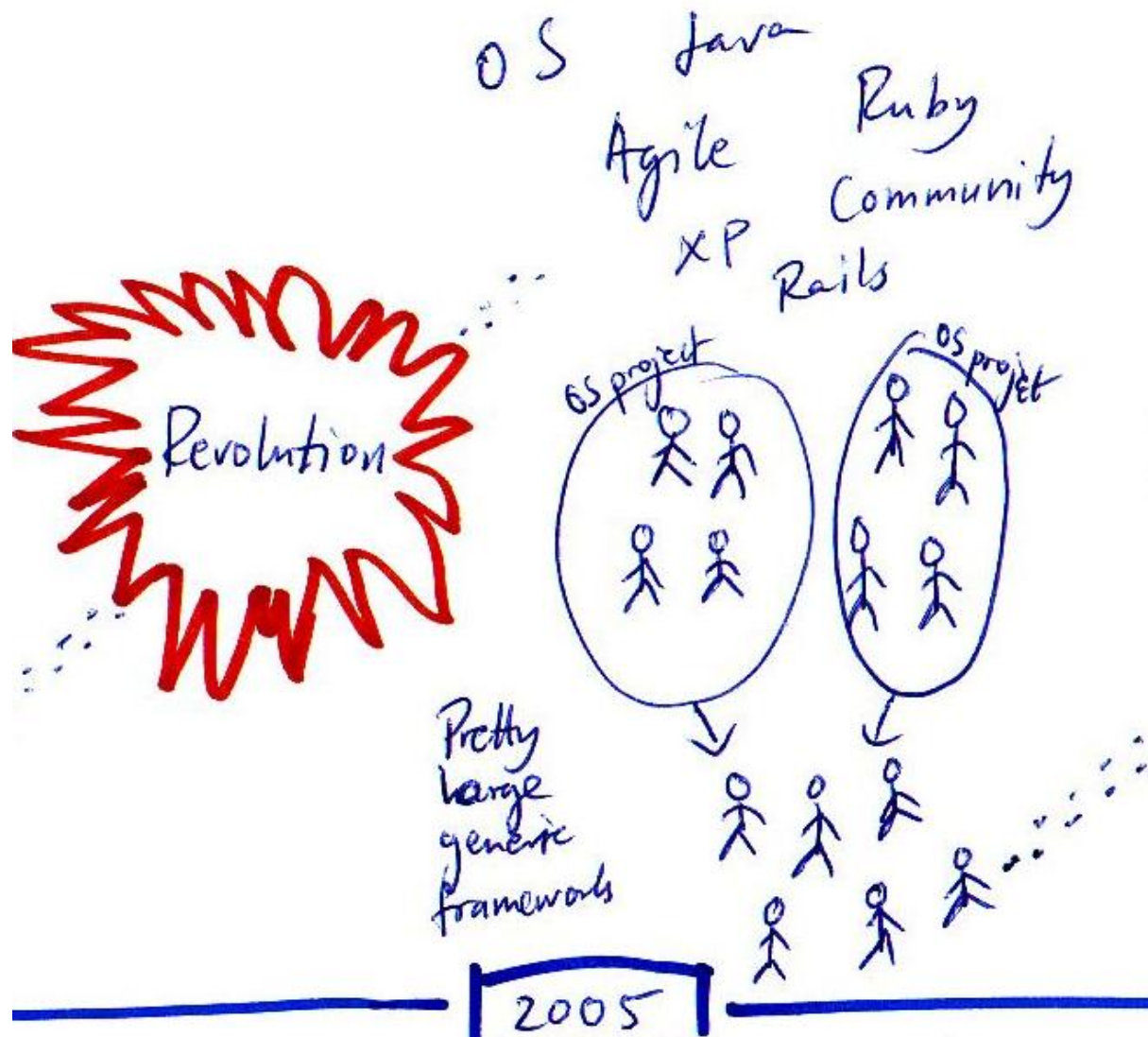


"Buy in to the whole thing,
and nothing else..."

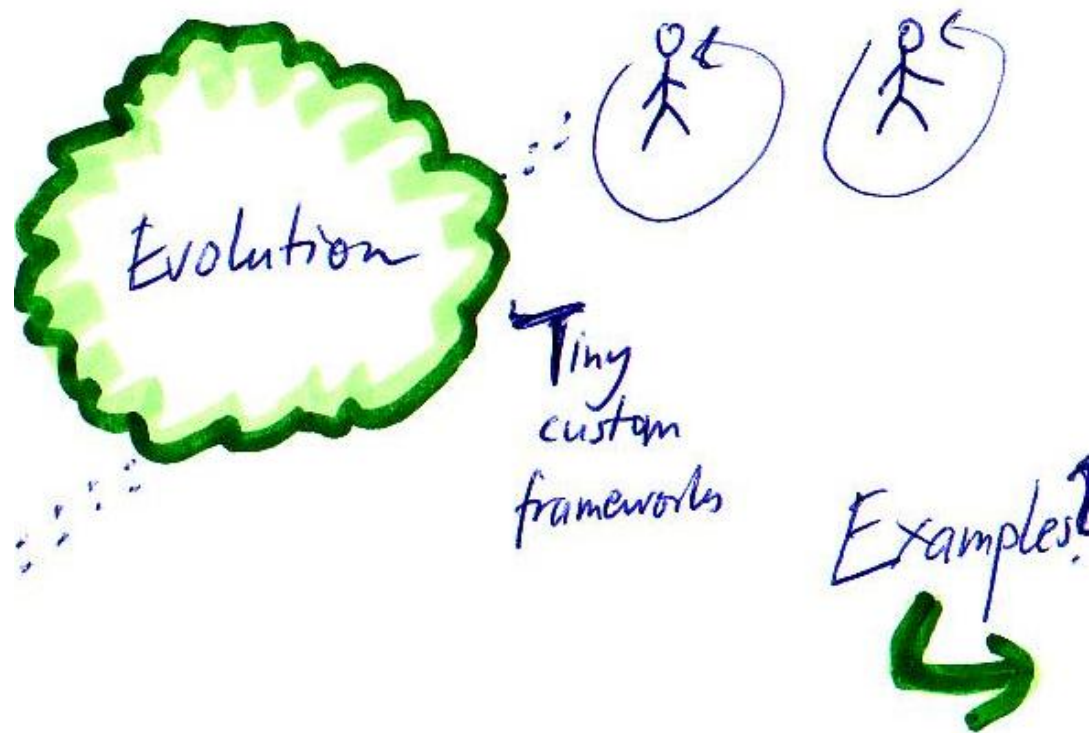


1990

ALT.NET



An alternative ALT. WET⁴



- 1990 ——— ↑ ^

Wizards
Datasets

Drag till you drop
Webforms

~ 11 layers

2005

How
DDD TDD Craftmanship
Elegance Quality
O/RM MVC A!

Custom
Large
generic
frameworks

↓

Crash

What

↓ ↓ ↓ ↓
Great code

Why

↓
\$

~5 layers

2010

BDD

REST

Real PDD

PSL

NO, NET ==

Not Only

Tiny!
great
code

3 layers

BDD helps with a red thread

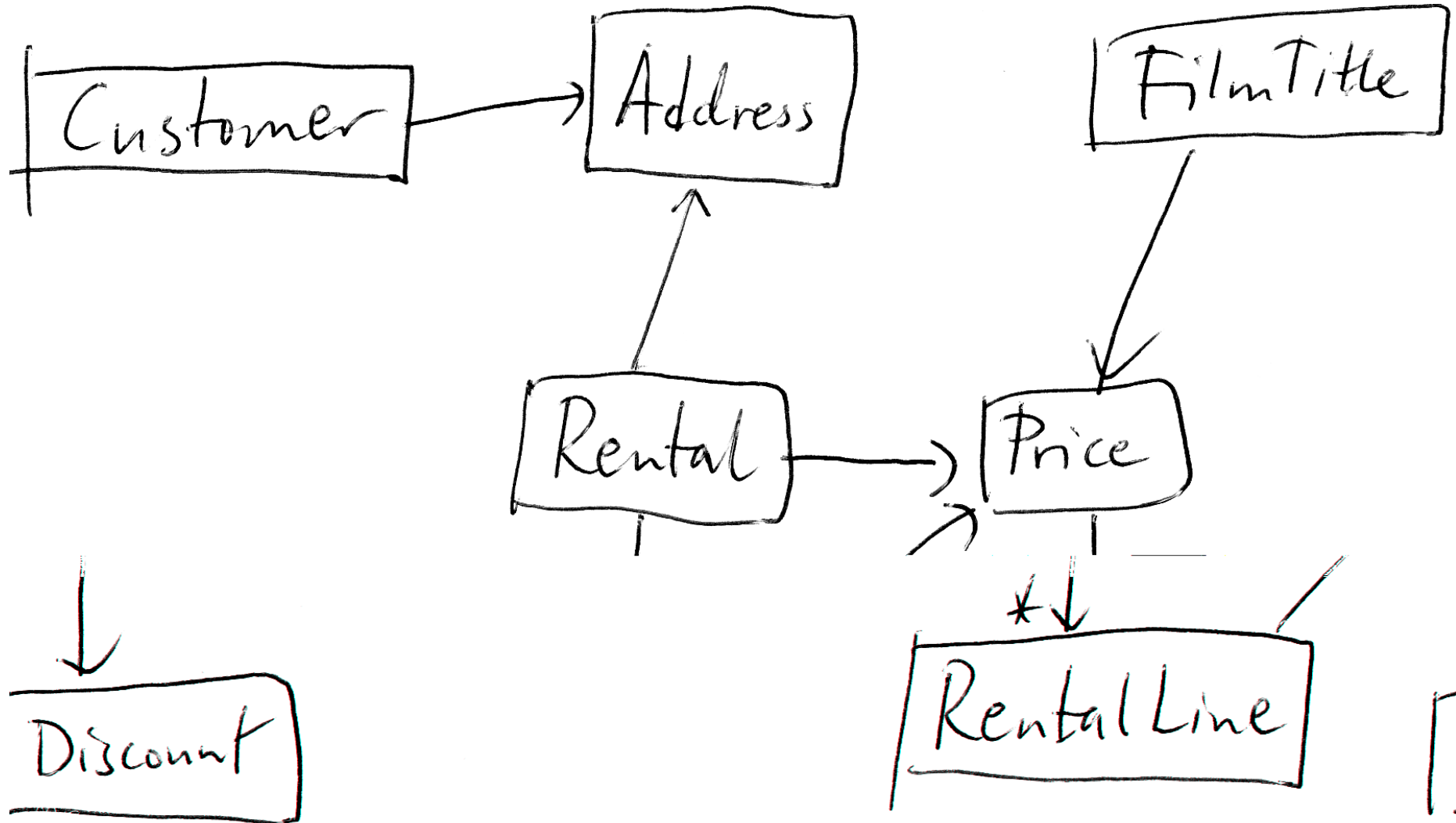
- The step definitions points out which unit test to write now
- That unit test points out what real code to write now
- When done, check that BDD test is green too

What is DDD?

Domain-Driven Design is an approach to the development of complex software in which we:

- Focus on the *core domain*
- Explore *models* in a creative collaboration of domain practitioners and software practitioners
- Speak a *ubiquitous language* within an explicitly *bounded context*

Value Objects



Like this?

```
var stinasÄgg = 7 * 12;
```

```
var pellesÄgg = 3 * 20;
```

```
var antaletÄggkorgen = stinasÄgg + pellesÄgg;
```

```
Assert.AreEqual(144, antaletÄggkorgen);
```

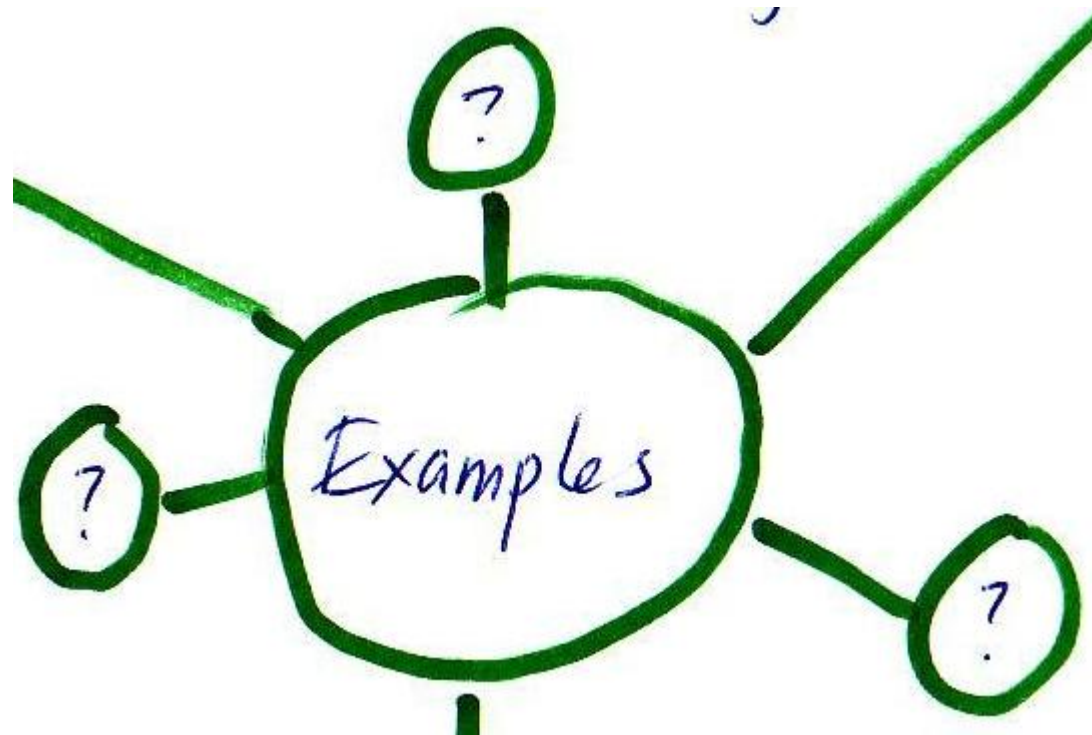
Or more like this?

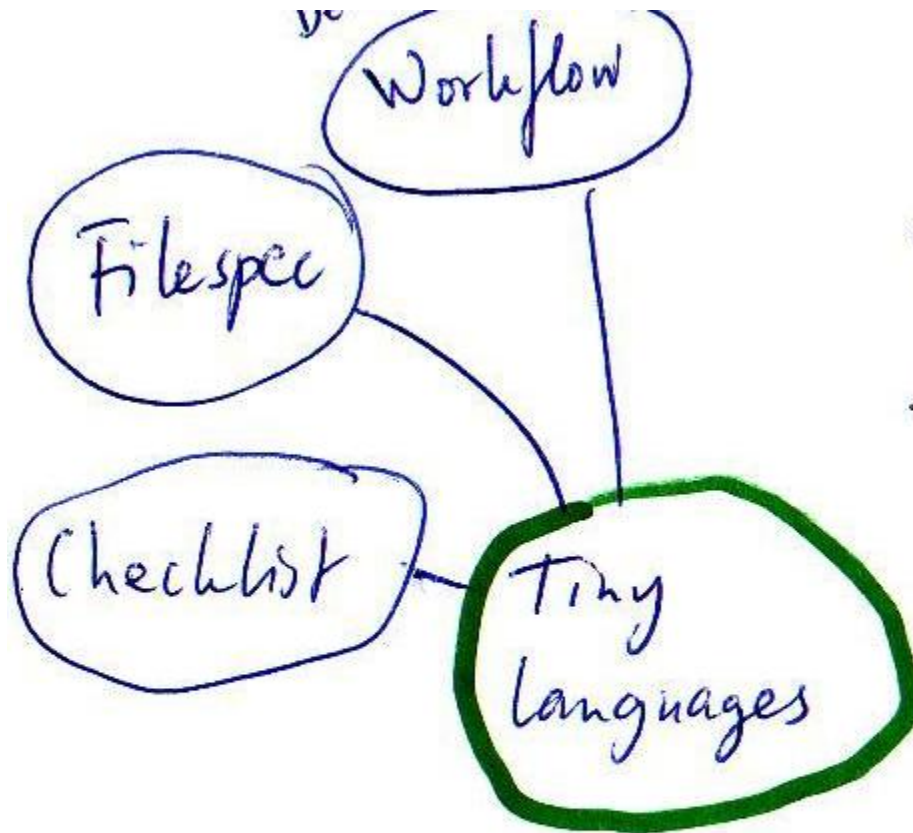
```
var stinasÄgg = Antal.Dussin(7);
```

```
var pellesÄgg = Antal.Tjog(3);
```

```
var antaletIÄggkorgen = stinasÄgg + pellesÄgg;
```

```
Assert.AreEqual(144, antaletIÄggkorgen.IStyck);
```



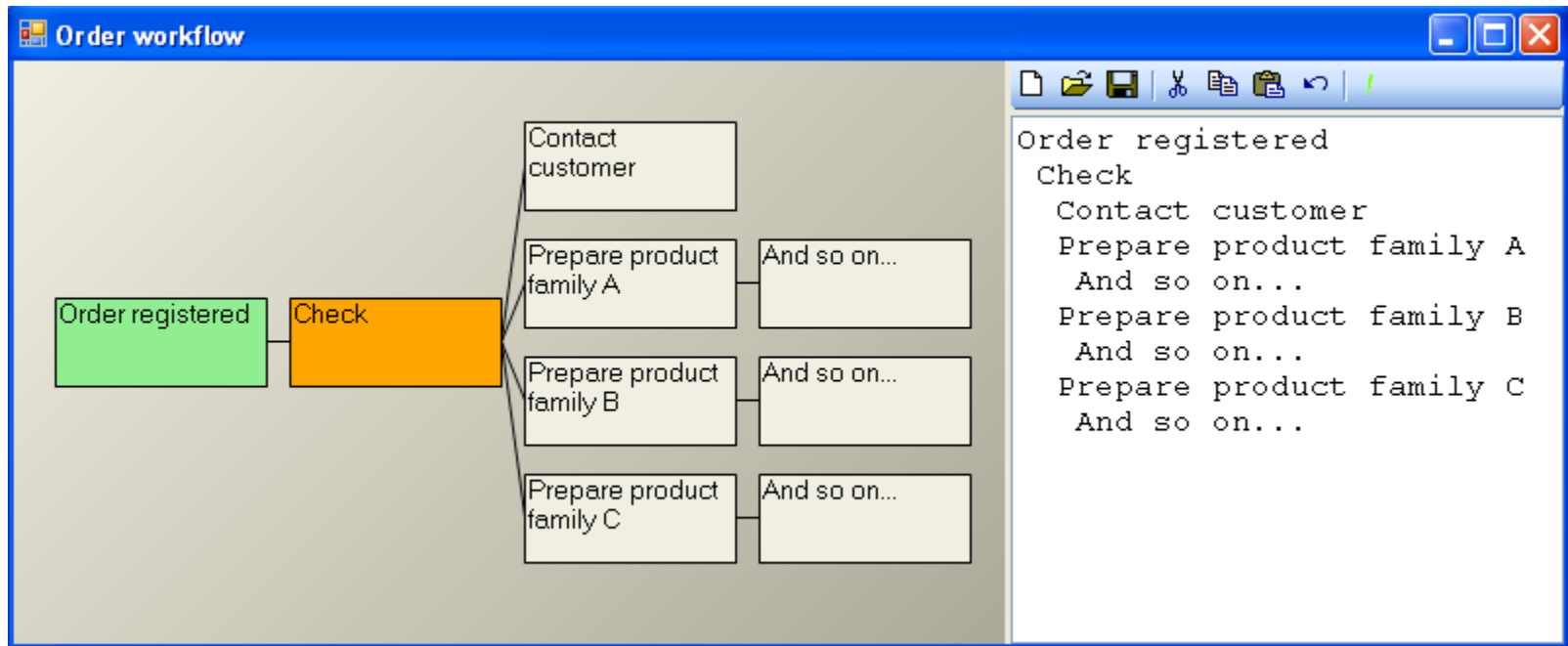


- Domain experts can read
- The documentation is the program

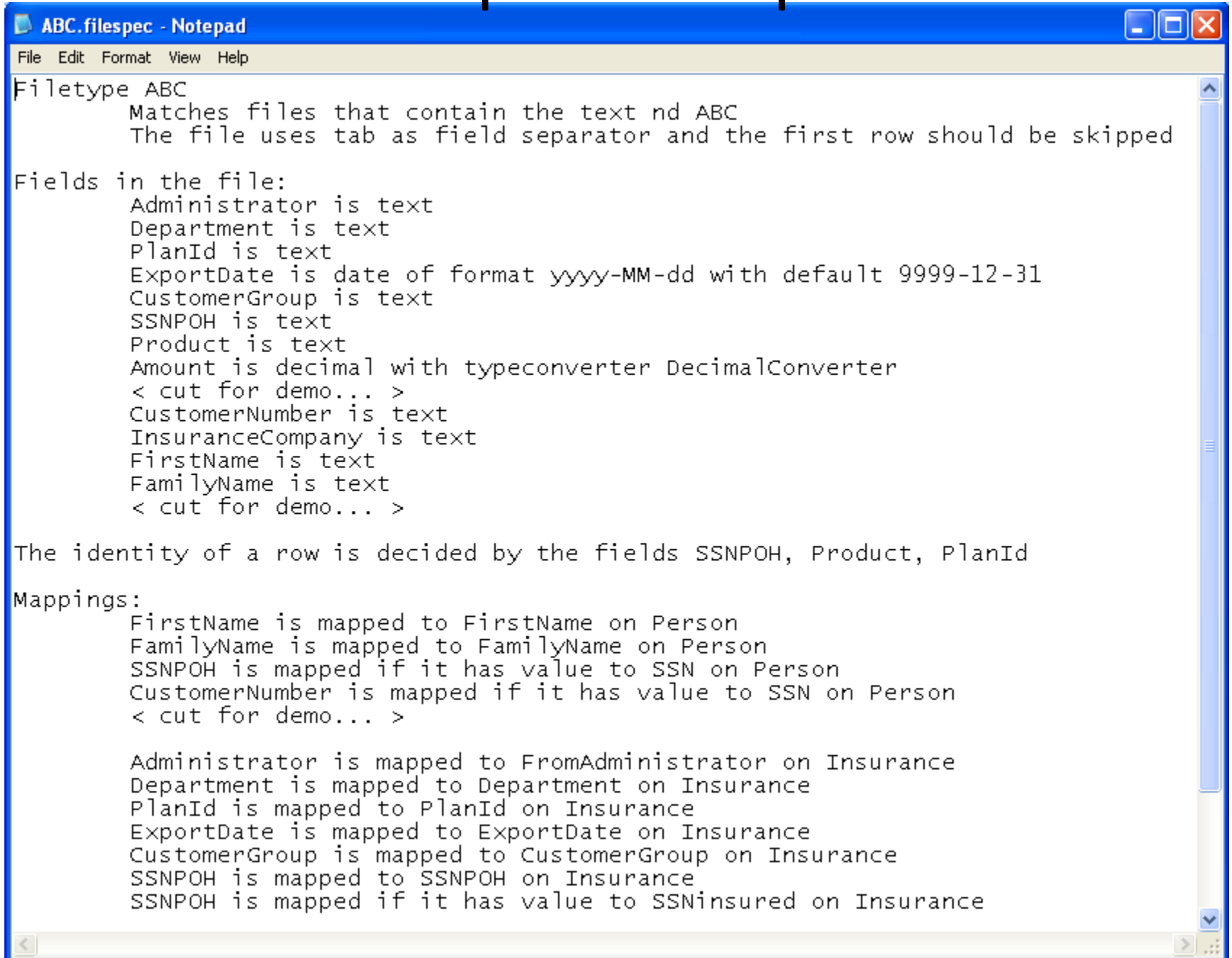
Domain experts
can read and
write!



Workflow example



Filespec example



```
ABC.filespec - Notepad
File Edit Format View Help
Filetype ABC
    Matches files that contain the text nd ABC
    The file uses tab as field separator and the first row should be skipped

Fields in the file:
    Administrator is text
    Department is text
    PlanId is text
    ExportDate is date of format yyyy-MM-dd with default 9999-12-31
    CustomerGroup is text
    SSNPOH is text
    Product is text
    Amount is decimal with typeconverter DecimalConverter
    < cut for demo... >
    CustomerNumber is text
    InsuranceCompany is text
    FirstName is text
    FamilyName is text
    < cut for demo... >

The identity of a row is decided by the fields SSNPOH, Product, PlanId

Mappings:
    FirstName is mapped to FirstName on Person
    FamilyName is mapped to FamilyName on Person
    SSNPOH is mapped if it has value to SSN on Person
    CustomerNumber is mapped if it has value to SSN on Person
    < cut for demo... >

    Administrator is mapped to FromAdministrator on Insurance
    Department is mapped to Department on Insurance
    PlanId is mapped to PlanId on Insurance
    ExportDate is mapped to ExportDate on Insurance
    CustomerGroup is mapped to CustomerGroup on Insurance
    SSNPOH is mapped to SSNPOH on Insurance
    SSNPOH is mapped if it has value to SSNinsured on Insurance
```

Checklist example

Create checklist

Create checklist

Name: Distribution execution 2010

Header: 2010-04-20 Preparations

Do manually: Check that backup has been taken

Do manually: Contact Helpdesk and ask them to execute "Rebuild Index" and shut down antivirus protection McAfee

Run command: CLEARXML Mission RNFIL

Header: 2010-04-21 More preparations

Do manually: XYZ

Header: 2010-04-23 More preparations again

Run command: AGRBOKF2 Mission XSEND with parameters Poll=AgrSndTrn

Header: 2010-04-24 And so on...|

Create

- UI matters. A lot.
- Great for discussions from day 1.
- Often has the worst and most code
- Need a look and feel refresh every now & then

Declarative
UI

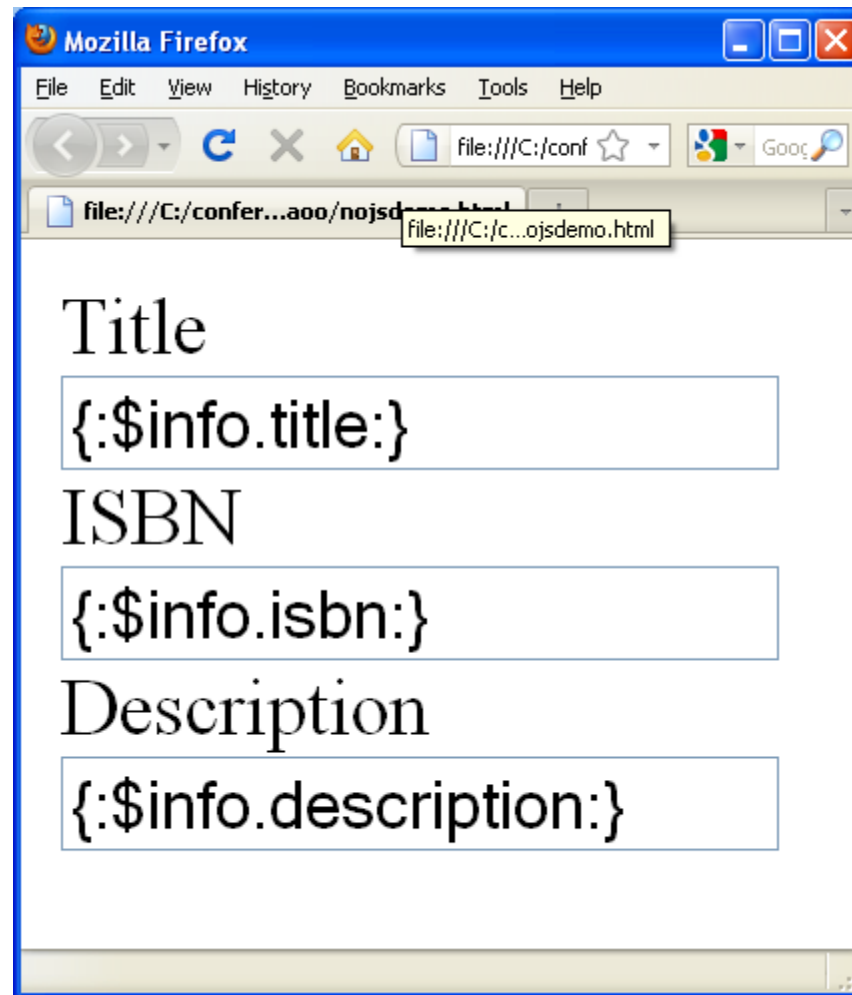
NoJS

- Semantic templating
- Metadata driven

Checklist
again

- Origin of hypermedia in DM

NoJS example



Checklist example again

Distribution execution 2010

2010-04-20 Preparations

Check that backup has been taken

Start: ☒ Name: Date: Comments:

Done: ☒ Name: Date: Comments:

Contact Helpdesk and ask them to execute "Rebuild Index" and shut down antivirus protection McAfee

Start: ☐ Name: Date: Comments:

Done: ☐ Name: Date: Comments:

Kommando

Parameters:

Ordered: x Started: _ Executed: _ Problem:

Done: ☐ Name: Date: Comments:

2010-04-21 More preparations

- Not all problems are relational... :-)

- But strangely, Oracle/SQL Server is almost mandatory



Custom storage

- Avoids "global db"
- Code disappears
- True aggregates
- Perf increases
- Operations says OK
- Good for big graphs
- Protobuf...
- Listings are relational migrations

Custom storage example

The screenshot shows the LINQPad 4 interface. The top menu bar includes File, Edit, Query, and Help. The main editor displays a C# query in 'Query 1*' with the following code:

```
var projects = new Projects("Data Source=.;Initial Catalog=TimeReg; Integrated Security=SSPI");
var project = projects.GetById(new Guid("A29E1A0B-2BE7-4F45-B8E4-0B304366C690"));
Console.WriteLine(project);
```

The results pane shows the output of the query, which is a **Project** object. The results are displayed in a tree-like structure:

- Project**
 - factor10.TimeReg.DomainModel.Project
 - Name**: Cloudy Sky
 - Customer**:
 - Customer**
 - factor10.TimeReg.DomainModel.Customer
 - Name**: Volvo
 - Id**: a29e1a0b-2be7-4f45-b8e4-0b304366c690
 - Version**: 1
 - Activities**:
 - List<String> (1 item)**: Testing
 - Consultants**:
 - List<Consultant> (1 item)**
 - Person**
 - Person**
 - factor10.TimeReg.DomainModel.Person
 - FirstName**: Svea
 - LastName**: Svensson
 - FullName**: Svea Svensson
 - IsReadyToGetRegistrations**: True

The status bar at the bottom indicates "Query successful (00:00.021)".

Results		Messages					
	Id	Version	Graph	GraphVersion	Name	Customer_Name	
1	A29E1A0B-...	3	0x0001000000FFFFFFFF...	1.0	Cloudy Sky	Volvo	
2	9F2326F3-...	3	0x0001000000FFFFFFFF...	1.0	Architecture Refactoring ...	Stena	

```

public Project GetById(Guid id)
{
    return storageMetadata.GetById(id);
}

public IEnumerable<ProjectForListing> ThatHasCustomerWithName
(string customerName)
{
    return storageMetadata.GetListByCriteria<ProjectForListing>
        ("Customer_Name", customerName);
}

```

```

projects.CreateScript();

```

Summary

ALT.NET was important

But the potential is way bigger

Let's unleash it!