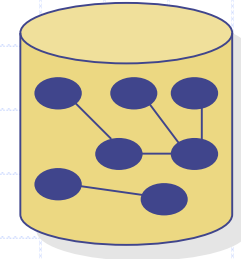


# Object Database Management Systems – Back to the future –



A (future)critical survey using db4o as a  
progressive example

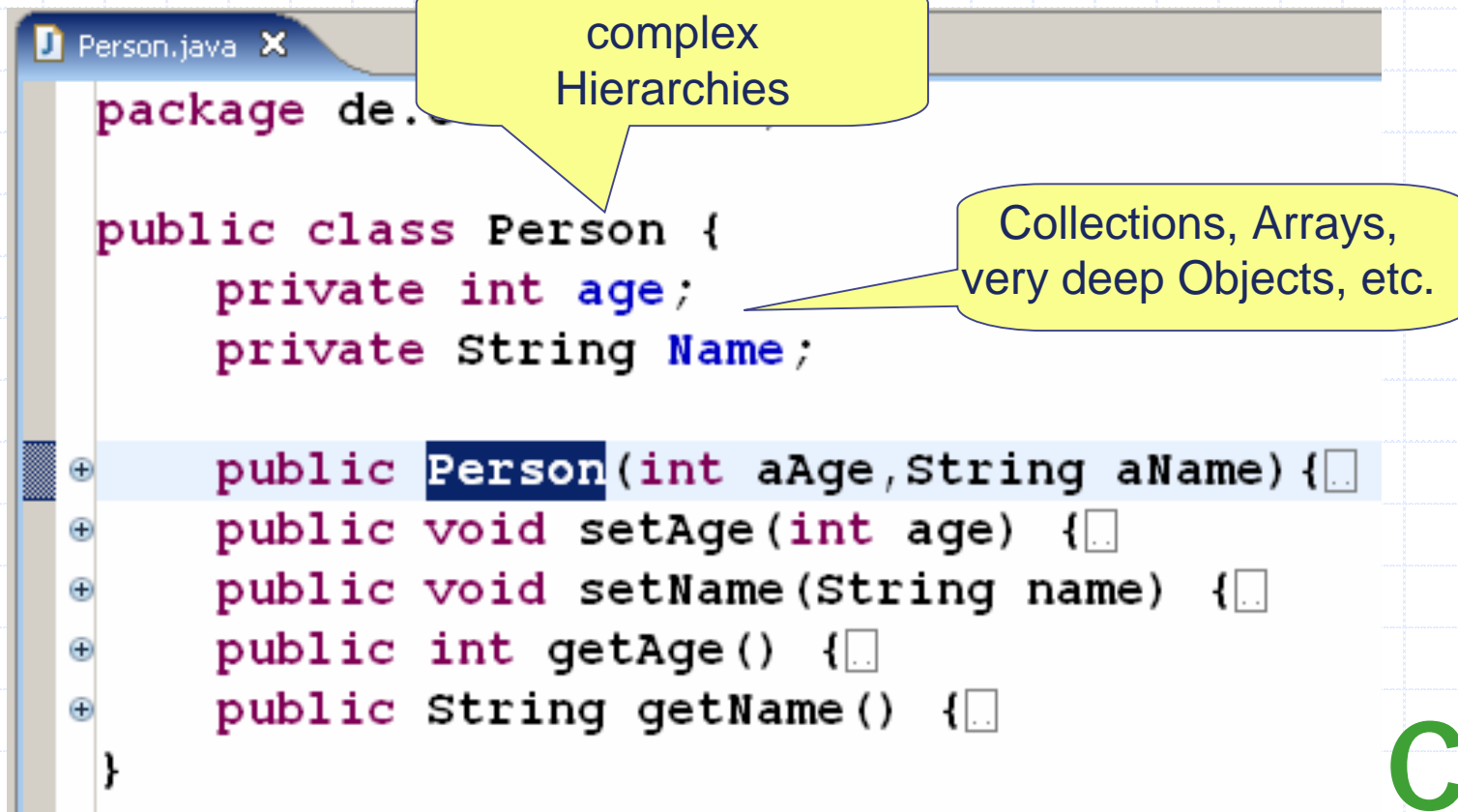






# Can this be true?

- Komplex ClassesP & QueriesP



The screenshot shows a Java IDE window titled 'Person.java'. The code defines a 'Person' class with two private fields: 'age' (int) and 'Name' (String). It also includes a constructor and four public methods: 'setAge', 'setName', 'getAge', and 'getName'. A yellow callout bubble points to the class name 'Person' with the text 'complex Hierarchies'. Another yellow callout bubble points to the 'age' field with the text 'Collections, Arrays, very deep Objects, etc.'. A large green letter 'C' is positioned in the bottom right corner of the code area.

```
package de...

public class Person {
    private int age;
    private String Name;

    public Person(int aAge, String aName) {..}
    public void setAge(int age) {..}
    public void setName(String name) {..}
    public int getAge() {..}
    public String getName() {..}
}
```

# The Solution?

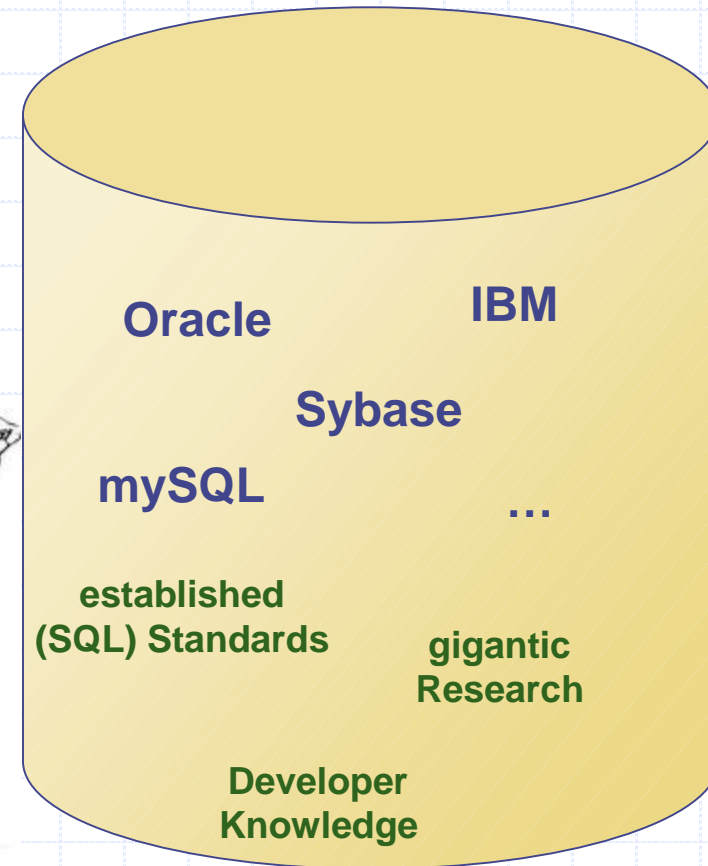
- Is db4o the all-in-one database suitable for every purpose?
- Are all other persistence solutions obsolete?



- A critical view on the past, the futures and architecture / decision szenarios...

# How everything began for real...

## ODBMS in the 90s




**No impedance mismatch!**

**Esther Dysons cite...**

# But ODBMS are not visible?!



- Did they fail?

*What we see:*

RDMBS at University teaching  
RDBMS at Ebay, Amazon, ...   
RDMBS in LAMP stacks for Portal XY  
RDBMS at Bank XY  
RDBMS at Ruby on Rails

....

*What we do not see:*

 ODBMS bei der Hertz Autobuchung  
ODBMS in jedem zukünftigen BMW   
ODBMS in Ricoh copier machines  
ODBMS in Seagate hard disks  
ODBMS in Bosch robots

...

- ODBMS has / had to find a niche...



# The db4o product

- 600k and low Memory Requirements
- Saves every object as is in one line
- Java, .Net languages (C#,...)
- C/S-Mode, ACID, Replication
- 3 Query Languages
- Replication in RDBMS-Systems
- and much more...

# Decision making quadrants

**High End SQL**  
Oracle, db2, ...

**other Worlds**  
XML DBs, File DBs,...

## Standard Questions:

- u Performance?
- u Big Databases?

## As well important:

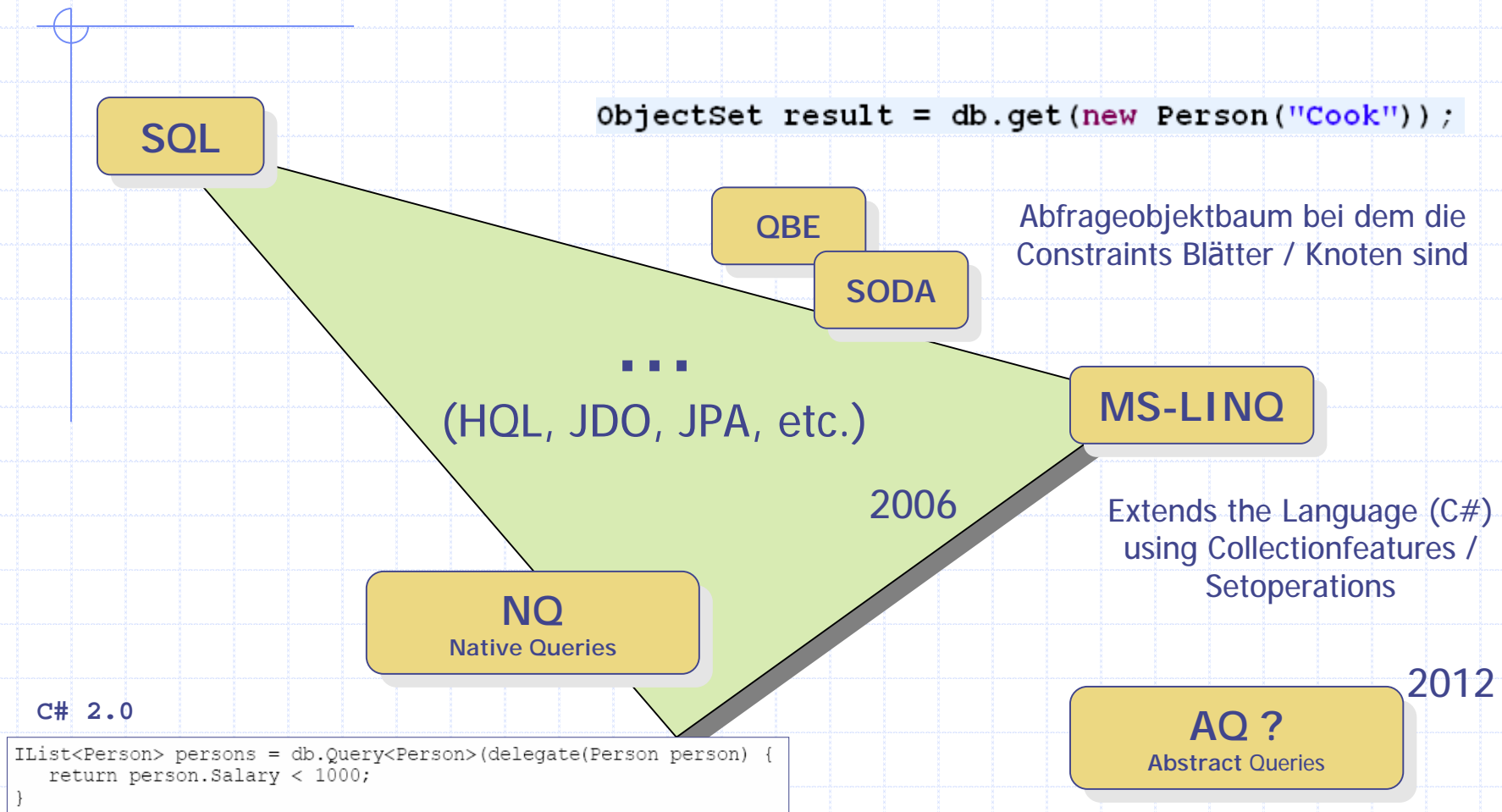
- u Development Time?
- u Maintainability/Refactoring?
- u Query Languages?

**Middle End SQL**  
HSQLDB, H2,  
Vista, SQL-Lite

**Object Databases**



# What happens in the World of Query Languages?





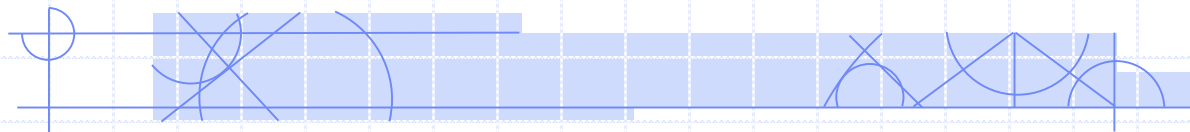
# Conclusion

- The world of Query Languages is moving fast
  - SQL gets a tough competition
- Decision- / Question-Catalog!
- The Persistenz-Space is really big
  - it spans Monsters (db2,Oracle) and exotic solutions (prevayler.org)
- Alternative solutions are often easy to learn and might fit even better as the standard solutions

# Quellen

- [db4o.com](http://db4o.com)
- [odbms.org](http://odbms.org) with OOPSLA Expert-Panel
- [odbmsjournal.org](http://odbmsjournal.org)
- [polepos.org](http://polepos.org)
- [msdn.microsoft.com/netframework/future/linq](http://msdn.microsoft.com/netframework/future/linq)
- search „Native Queries Whitepaper“ ...

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