PL/DB

Native Queries

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w/Carl Rosenberger, db4objects

Myths
Distance doesn’t matter
Persistence is orthogonal
Objects are Abstract Data Types

Orthogonal Persistence
for all student
if student’s age < 20 then
print student’s name

...but slow.

Common...

EJBQL, JDOQL, ...

Query q = em.createQuery(
   "select p from Student s
   where s.age < 20");
List<Student> students =
   (List<Student>) q.getResultList();

SODA, Hibernate...

Query query = database.Query();
query.Constrain(typeof(Student));
query.Descend("age")
   .Constrain(20).Smaller();
IList students = query.Execute();
...really bad idea

in case you have been desensitized

Better...

Native Queries

List<Student> students = 
database.query<Student>()
    new Predicate()
    boolean match(Student student){
        return student.getAge() < 20;
    }
};

...plain old java!

Impedance Mismatch

Solve Simultaneously
Criteria Shipping (WHERE)
Navigation Prefetch
    Aggregation/Multi-level Iteration
Bulk Data Manipulation (UPDATE/INSERT)
Transactions
Interactions with
Syntax and type checking
Parameters, Dynamic Queries, Modularity

Conclusion

• Technologies
  - Safe/Native Queries
  - LINQ from Microsoft
• Native Query Implementations
  - db4Objects
    • Industrial-strength DB, this fall
  - POJQ on Java.net
    • Plain old java queries