

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

Pretty...

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