

**OODB-EYEDB**

# Administration

- Starting
  - `eyedbctl start`
- Create database
  - `eyedbadmin database create mydb`
- List database
  - `eyedbadmin database list`
- Add User
  - `eyedbadmin user add mahasiswa`

# Administration

- Change User Password
  - eyedbadmin user passwd mahasiswa rahasia
- Grant Database Access
  - eyedbadmin user dbaccess mahasiswa mydb rw
  - eyedbadmin user dbaccess mahasiswa mydb admin
- List User
  - eyedbadmin user list

# Schema Definition using ODL

```
// person.odl
class Address { int num; string street; string town; string
country; };
class Person {
    string firstname;
    string lastname;
    int age;
    Address addr;
    Person * spouse inverse Person::spouse;
    set <Person *> children; };
class Employee extends Person { long salary; };
```

# ODL

- Run Scripts
  - `eyedbodl -d mydb -u person.odl`
- See Schema
  - `eyedbodl -d mydb -c "select schema" -print`
- Generate ODL
  - `eyedbodl -d mydb --gencode=ODL`

# OQL

- Running oql
  - eyedboql –d mydb –w
- Lets
  - create a person named "john wayne"
  - create a person named "mary poppins"
  - mary them
  - create 3 "john wayne" children named "baby1", "baby2" and "baby3"

# OQL

```
john := Person(firstname : "john", lastname : "wayne", age : 72);  
= 2585.2.196439:oid ?
```

```
? mary := Person(firstname : "mary", lastname : "poppins", age :  
68);  
= 2587.2.702511:oid
```

```
? john.spouse := mary;  
= 2587.2.702511:oid
```

# OQL

? add Person(firstname : "baby1", age : 2) to john->children;

= 2589.2.36448:oid

? add Person(firstname : "baby2", age : 3) to john->children;

= 2595.2.683802:oid

? add Person(firstname : "baby3", age : 4) to john->children;

= 2597.2.134950:oid

**\commit**



# OQL

- Remove Classes
  - `eyedbodl -d mydb -u --rmcls=Employee`
- Remove Database Schema
  - `eyedbodl -d mydb -u -rmsch`

# OQL

? **eyedboql -d mydb -w -c "select Person;"**

= bag(2597.2.134950:oid, 2595.2.683802:oid,  
2589.2.36448:oid, 2587.2.702511:oid,  
2585.2.196439:oid)

# OQL

- `eyedboql -d mydb`

- **Query**

```
select Person ;  
select Person.firstname =  
"John"  
= bag(2585.2.196439:oid)  
\print
```

```
Person {2585.2.196439:oid} = {  
  firstname = "john";  
  lastname = "wayne";  
  age = 72;  
  addr Address = { num =  
  NULL; street = NULL;  
  town = NULL;  
  country = NULL; };  
  *spouse =  
  {2587.2.702511:oid};  
  children set<Person*> = set  
  {  
    name = ""; count = 3;  
  };  
};
```

# OQL

- Valid OQL
  - select Person.name
  - select p.name from Person p
  - select p.name from Person as p
  - select p.name from p in Person
- Not valid OQL but allowed
  - Select \* from Person ;

# OQL

- Valid OQL
  - `count(select p from Persons p)`
  - `max(select e.salary from Employees e)`
  - `first(select x from Person x)`
- Misc
  - `p := first(select Person);`
  - `p.name := "johnny";`