

3rd give bob privileges on view
GRANT SELECT
ON YOUNGEMP TO Bob;

How GRANT WORKS:

When a grant is executed a privilege descriptor is added to a table. Consists of Grantor, Grantee and Granted privilege. When a user creates an object like a table he is given default privileges.

Roles

CREATE ROLE YOUNG_ADMIN;

GRANT [INSERT, UPDATE, DELETE,
SELECT] ON YOUNGEMP
TO YOUNG_ADMIN;
OR
maybe
ALL PRIVILEGES

ALTER USER Bob ROLE
YOUNG_ADMIN;

Object-Oriented Databases

Two Kinds

OODBMS - alternatives to RDBMS
typically use alternative data
model called Object Data Model (ODM)
and query language (OQL)

[ORDBMS - extend existing RDBMS
extend SQL

will
focus
on

How does OODBMS differ from programming languages
OO and from RDBMS data?

- persistent, but need to be able to find objects
satisfying a query quickly
- data itself has structure unlike RDBMS.

~~Two kinds of large objects~~

Examples Usage Storage of large objects

~~Two kinds~~

- could be mainly unstructured Blobs
Ex) JPG, MP3. might want to be able to
find song titles, etc.

- structured and large
Ex) Airplane assembly.

How OO in Oracle SQL works

Can create new types:

create or replace type complex
as object

(~~r real~~, ~~i real~~, member function length
return real);

To define f:

```
create type body complex as
  member function length return real as
begin
  return r*r + i*i;
end length;
end;
```

To use type: create table R (c complex)

To insert into this table: insert into R values (complex(5,6));

To query:

```
select rr.c.r, rr.c.length
from R rr
where rr.c.length > 5;
```

Can use external name variant of member f as to query from java

XML Types

create table xml_test

(id number(3) data XMLTYPE);

insert into xml_test values

```
(123, xmltype.createxml(' <firstvalue>5 </firstvalue> '))
select x.id, x.data.extract(' /firstvalue/text() '
                          .getStringVal()
                          AS "first"
from xml_test;
```