Final Exam -2

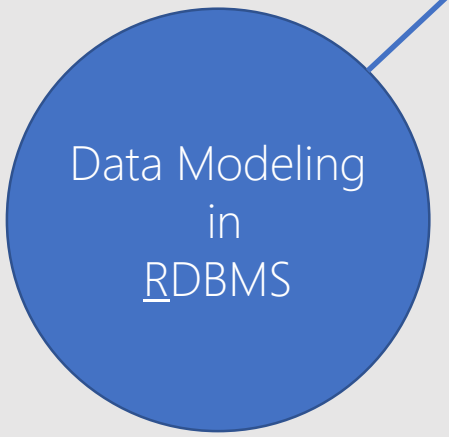
Section	Date Time	Location
011	2019-04-23 12:00	KHE332
021		KHE323
031		KHE332
041		KHE323

www.ryerson.ca/registrar/students/exams/

Q4Me -1

Book vs. Slides	W10: CH06 (1st & 2nd Ed.)
Lab	?
Last Weeks	?

Today



Real World Entity

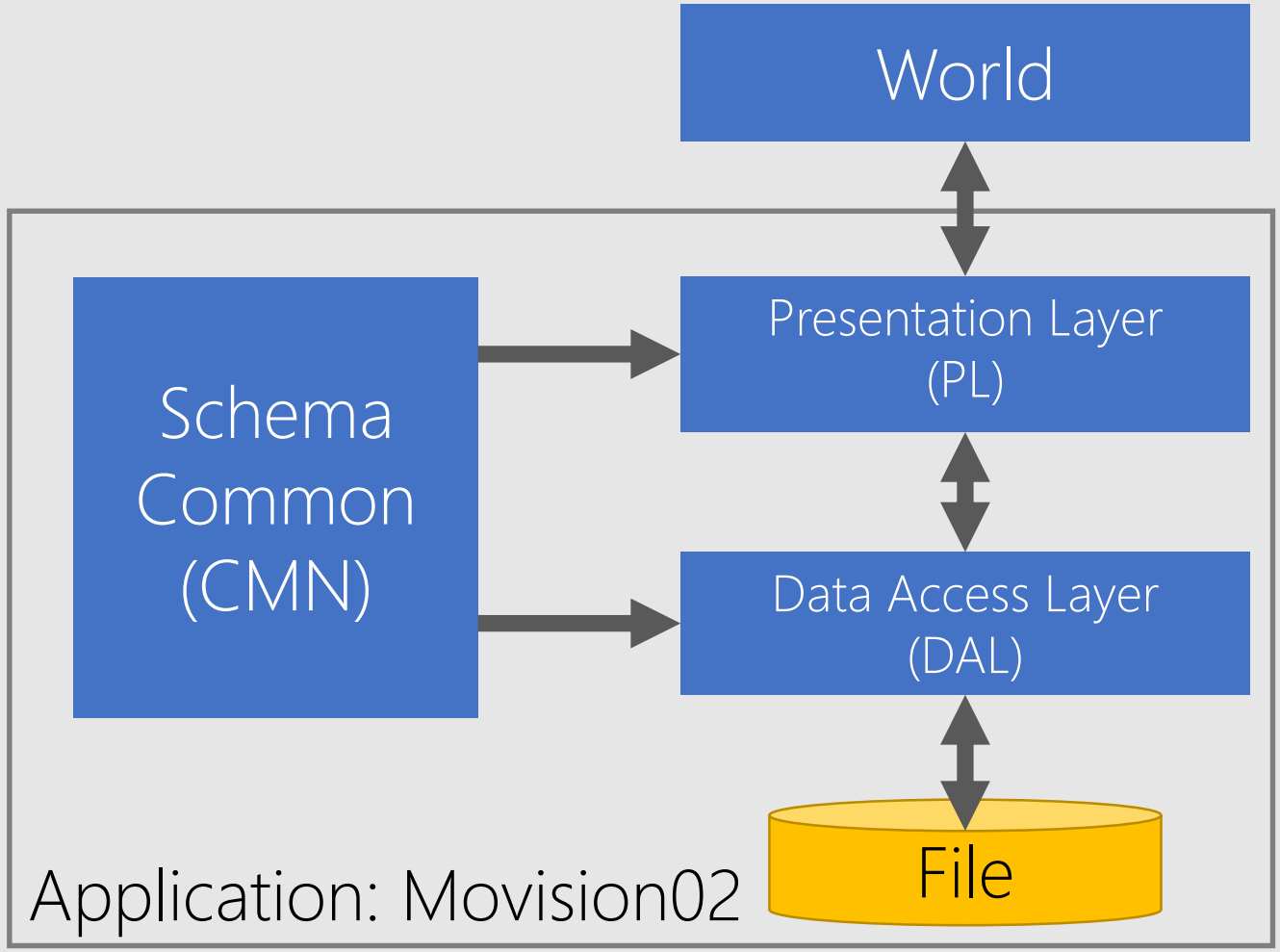
Conceptual Level | Entity-Relationship Model (E/R)

| Logical Level | Relational Model

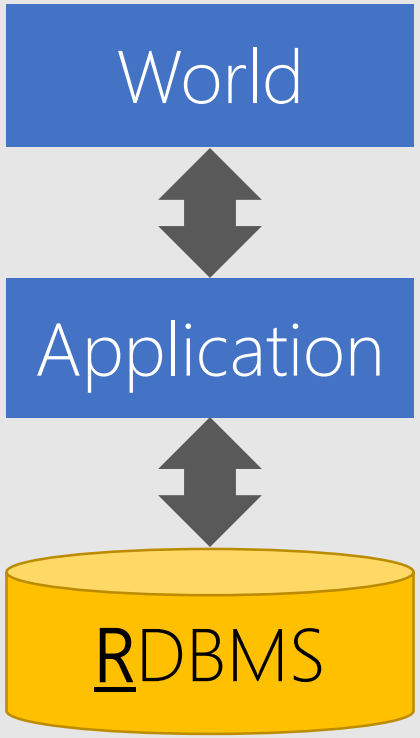
| Physical Level | SQL

Computable Entity

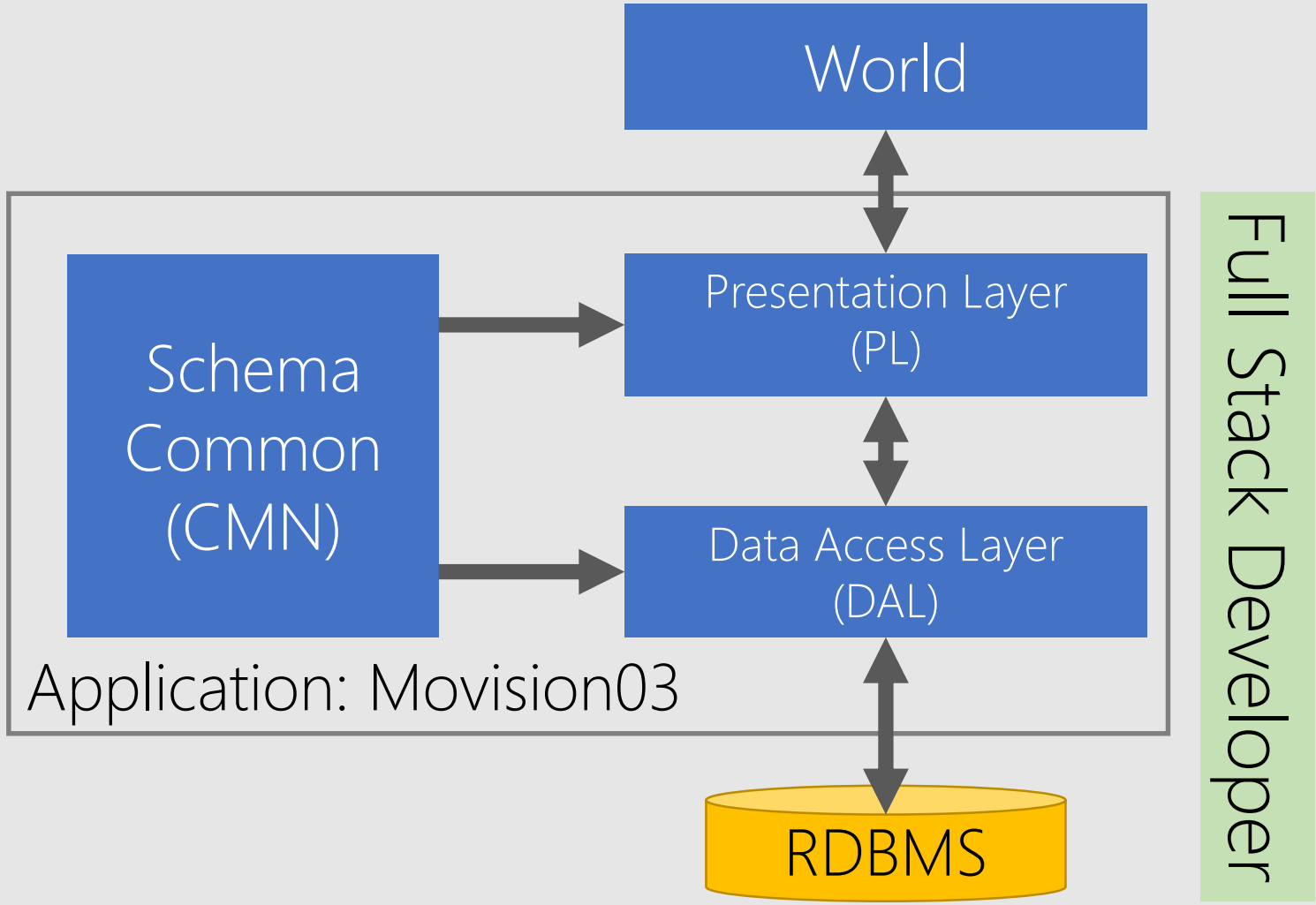
Physical Level × File



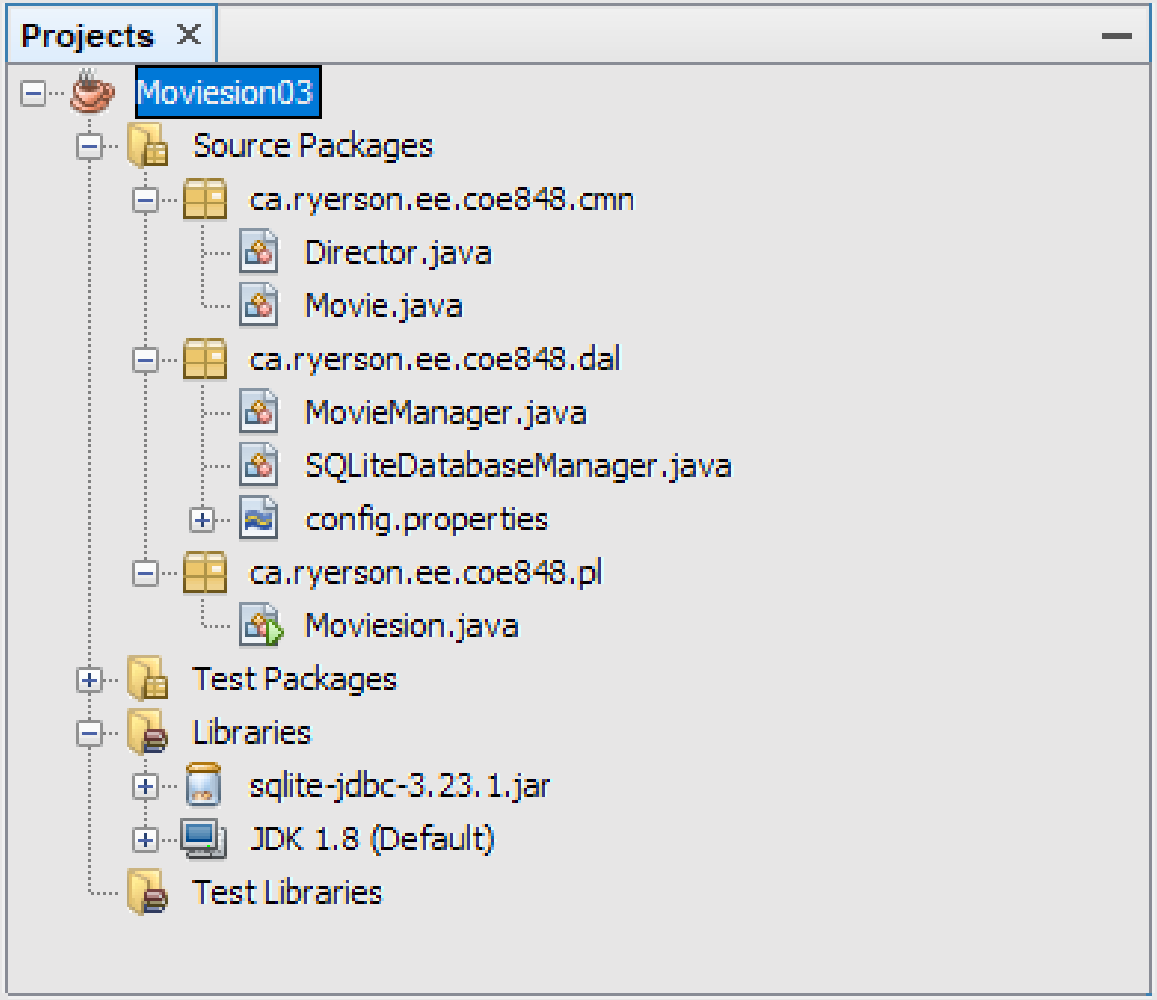
Physical Level × RDBMS



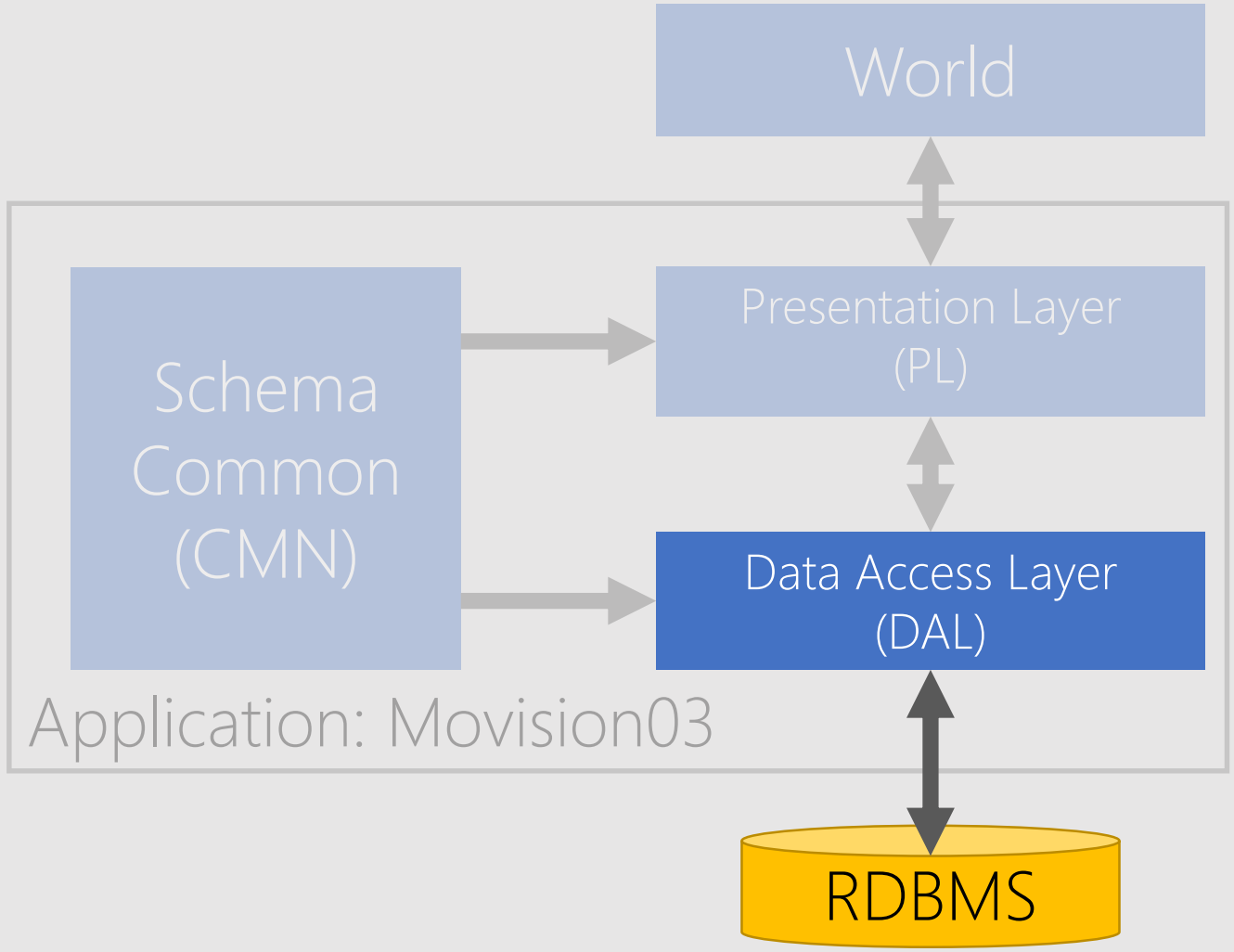
Physical Level × RDBMS



Physical Level × RDBMS



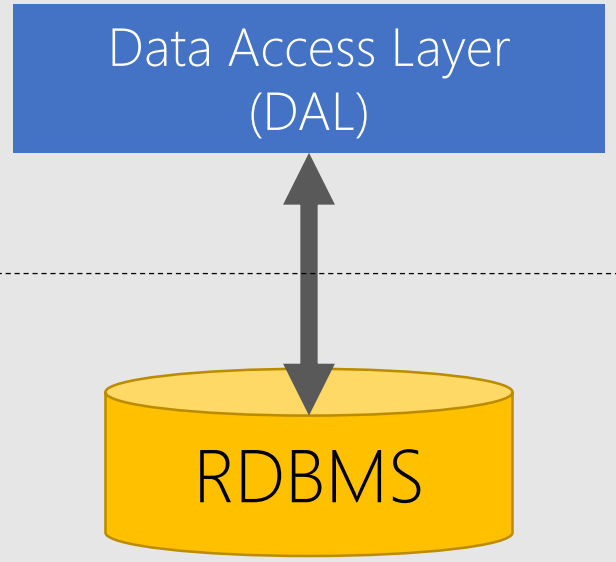
Physical Level × ORM



Physical Level × ORM

Object Relational Mapping (ORM)

Object

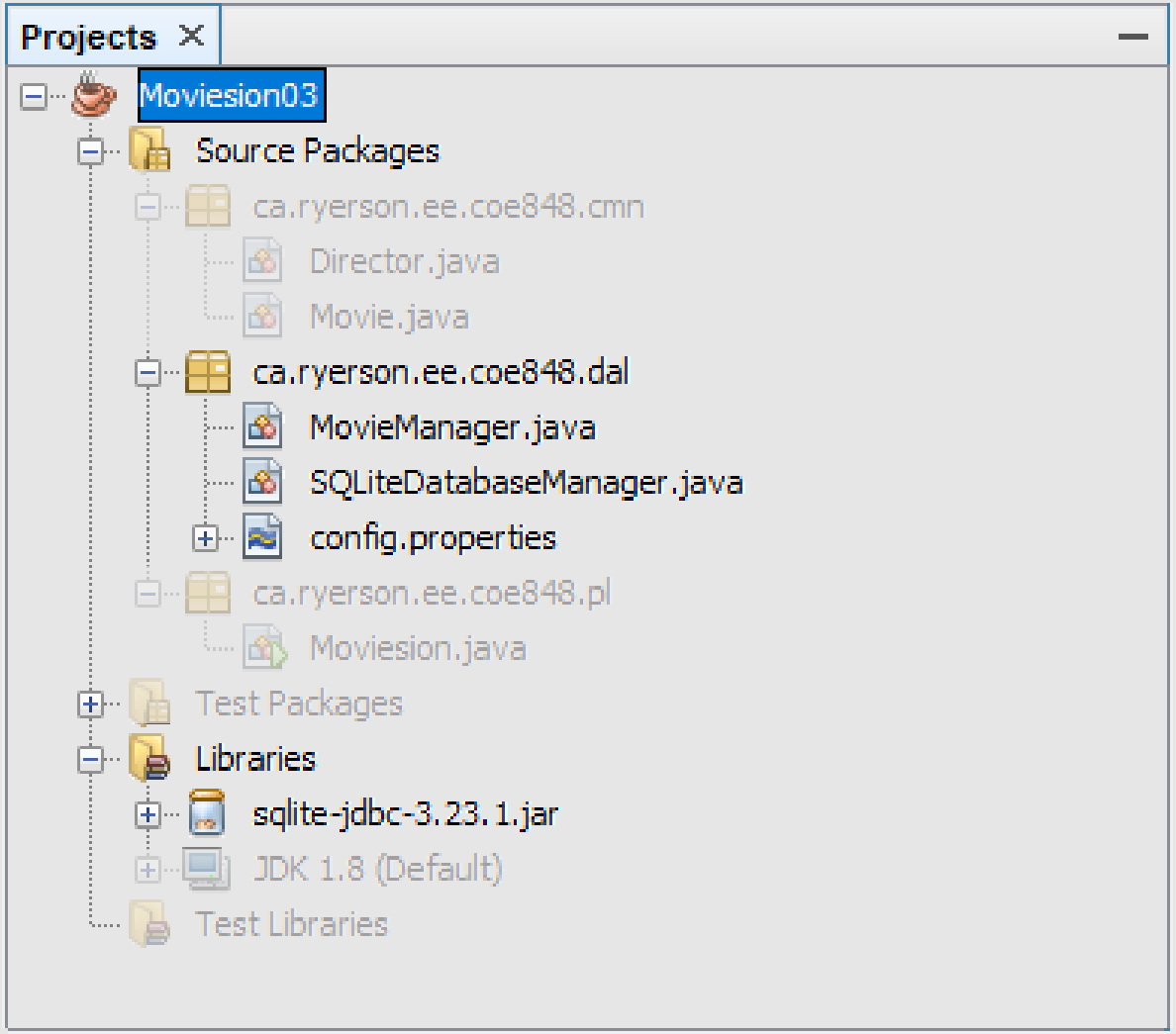


Function

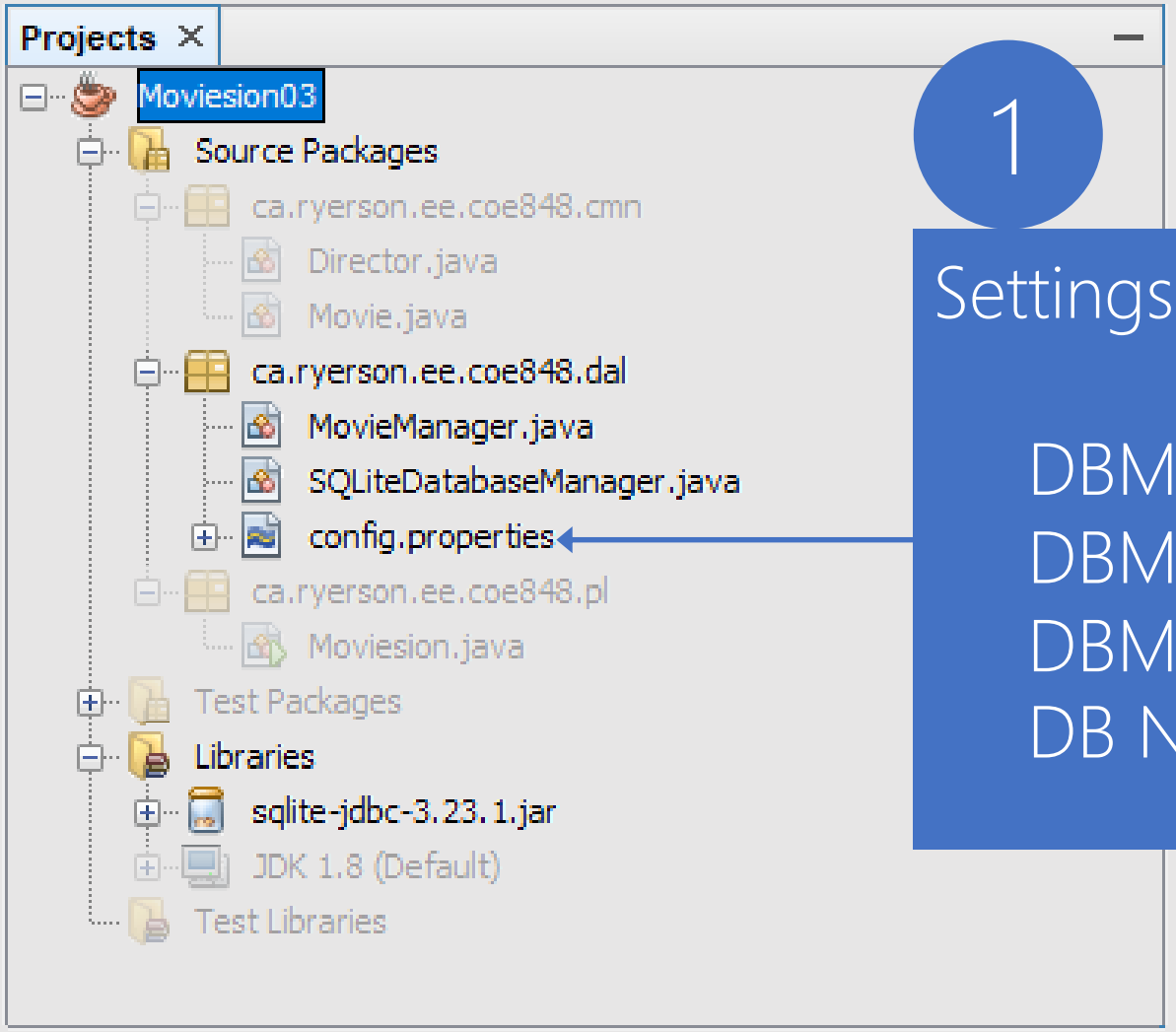
Relation
(Table)

SQL
(DML | DDL)

Physical Level × ORM



Physical Level × ORM

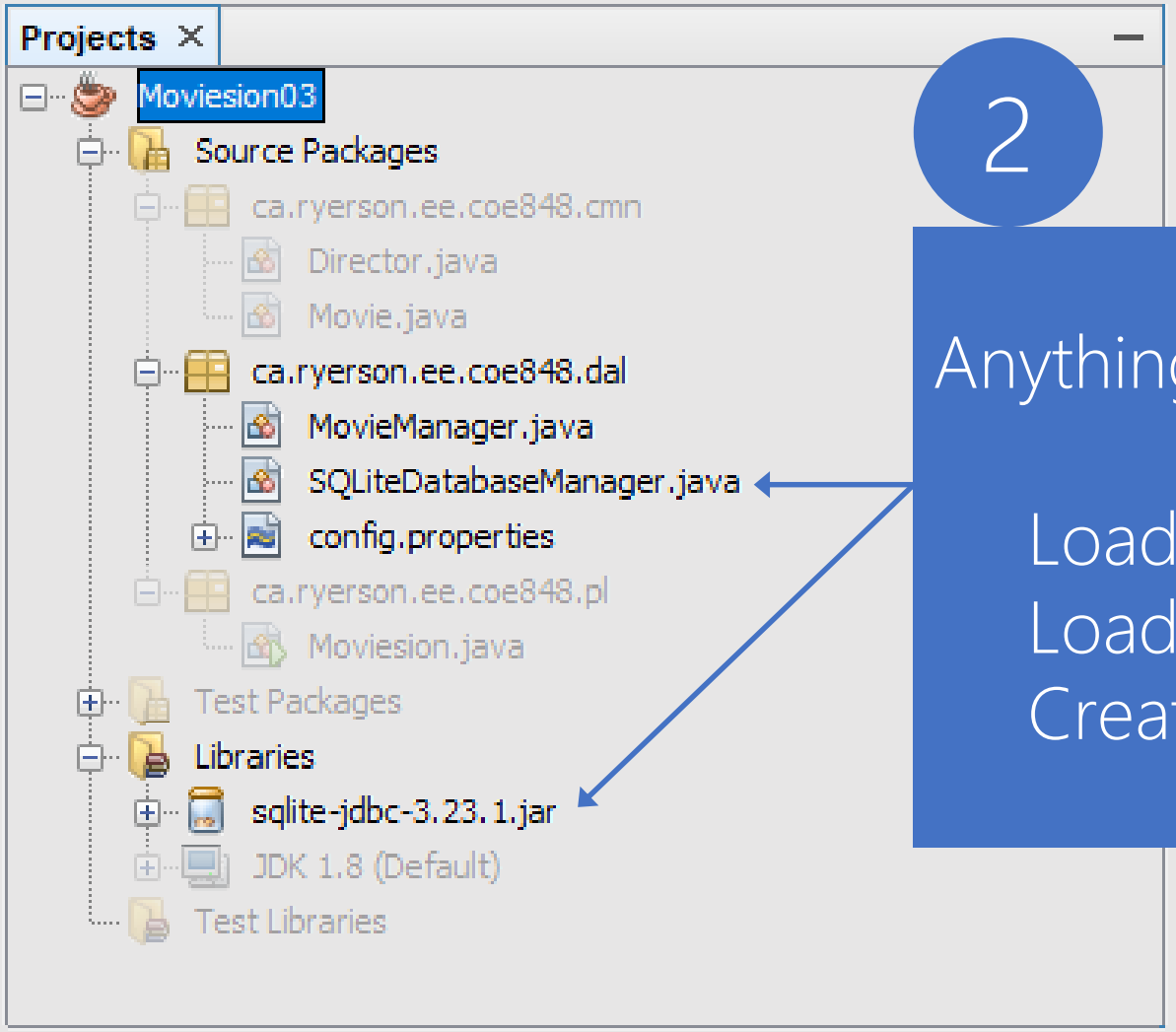


1

Settings to connect to DBMS:

- DBMS Location
- DBMS Username
- DBMS Password
- DB Name

Physical Level × ORM

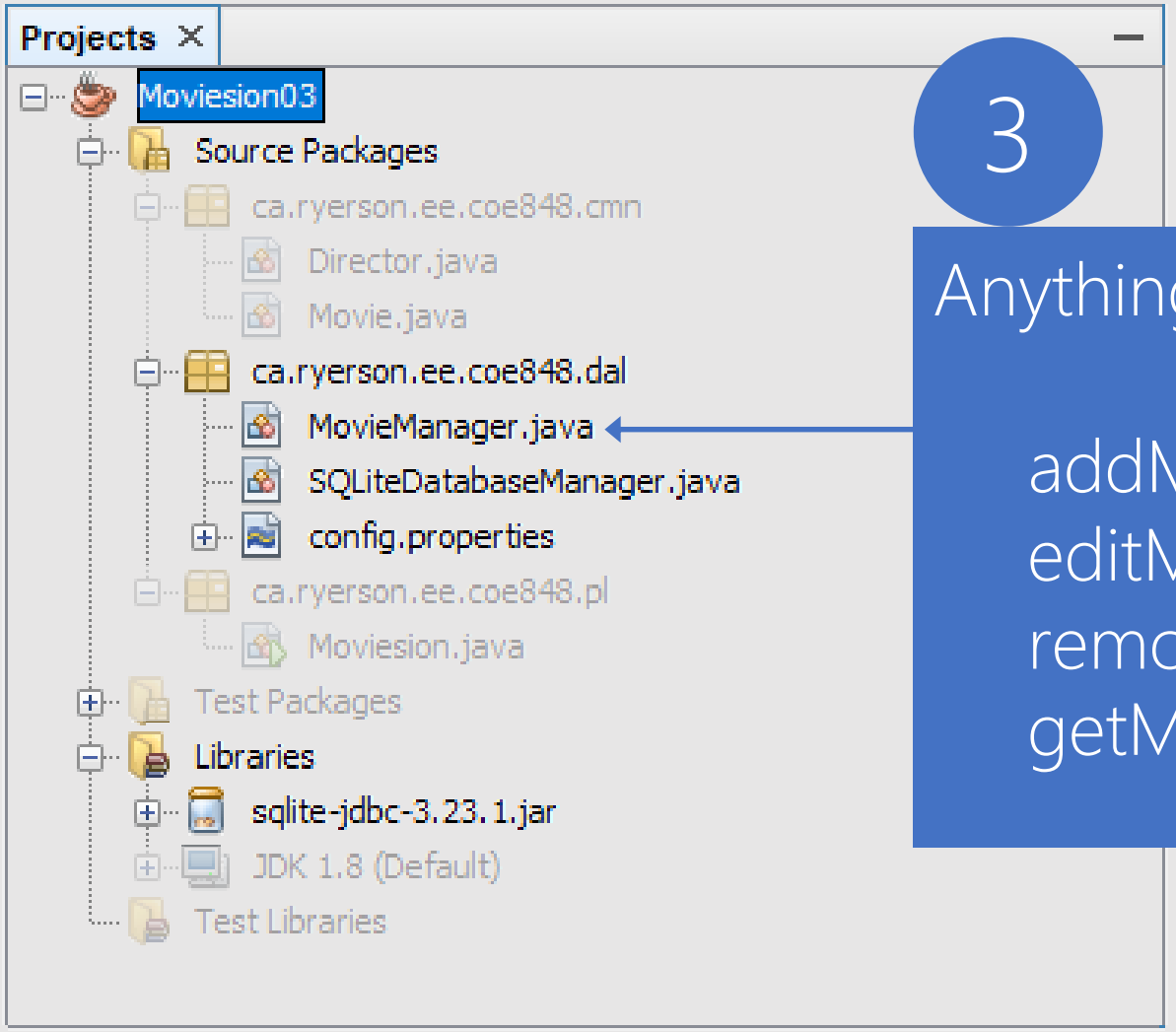


2

Anything related to DBMS connection:

- Loading JDBC library
- Loading settings from config file
- Create a connection

Physical Level × ORM

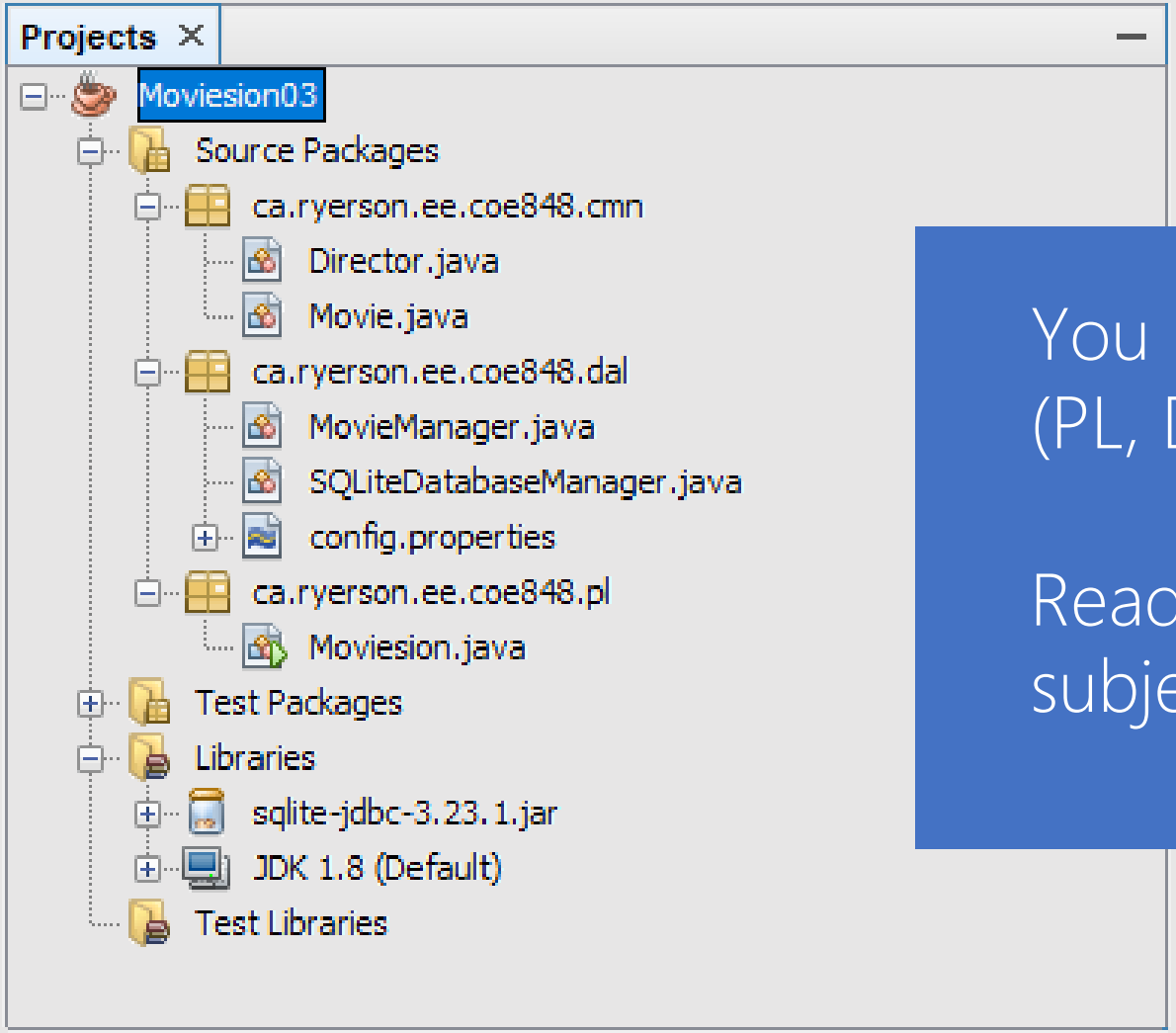


3

Anything related to Movie (ORM):

addMovie()	INSERT
editMovie()	UPDATE
removeMovie()	DELETE
getMovie()	SELECT

Physical Level × ORM

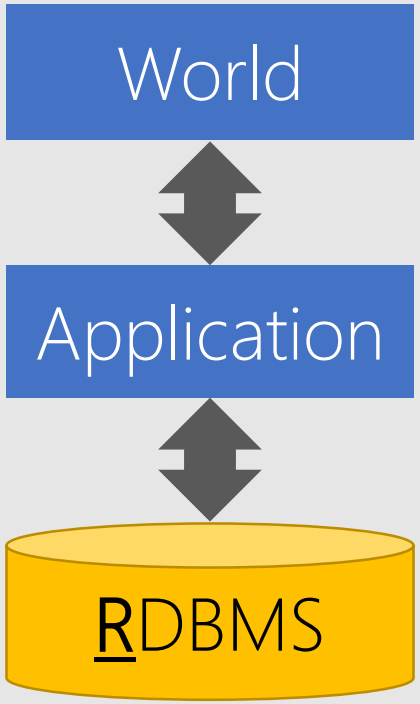


You have to follow 3-layered architecture (PL, DAL, DB) for your final project.

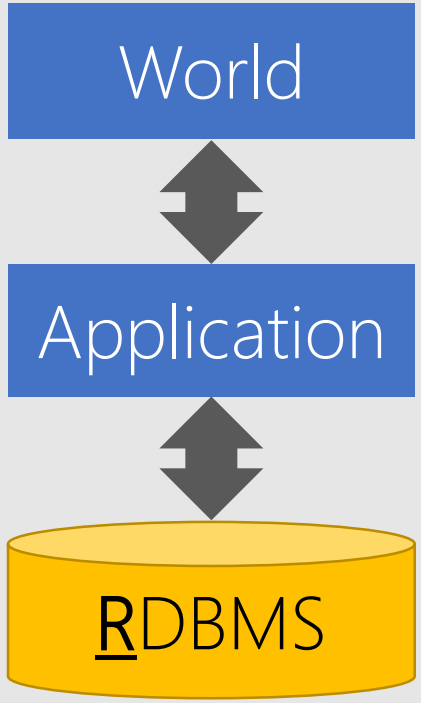
Read the code carefully as it might be subject of final exam questions!

DB vs. APP Level Processing

How many movies do we have?



DB Level Processing

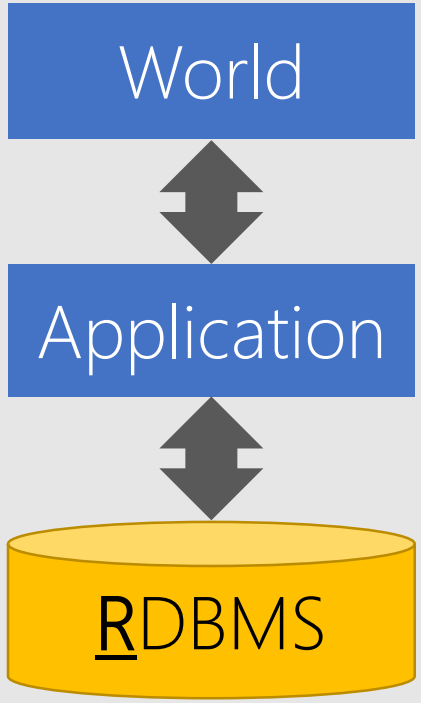


How many movies do we have?

In SQL: what is the movie count?

I) Count the movies
II) Return a single number

APP Level Processing



How many movies do we have?

I) Get all movies
II) Count the movies

Return all movies

DB vs. APP Level Processing

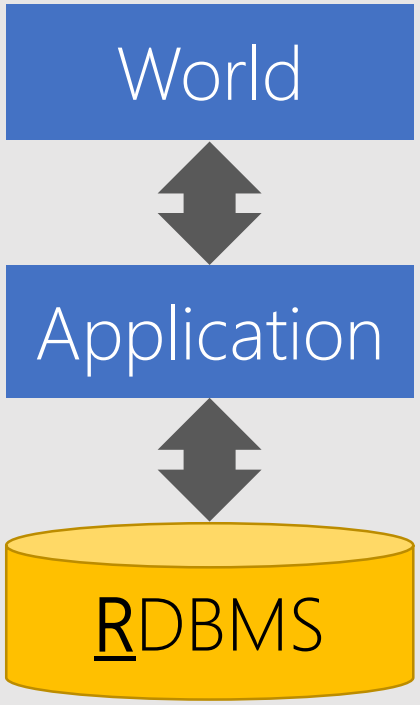
APP Level

+:

Only simple SQL
Able to do very complex tasks

–:

Slow, moving all data to app. level
Waste of network bandwidth



DB Level

+:

Fast, no need to move data
Fast, DBMS is a powerful machine

–:

Master SQL language
Not able to do very complex tasks

Ad hoc SQL Query

Ad hoc query is created to obtain info as need arises,

e.g., which director has made the most movies?

Contrast with a query that is predefined & routinely processed,

e.g., INSERT, UPDATE, DELETE, SELECT by Id