Oracle

PID	PNAME	PRICE	QTY
10	OMEGA	5000	2
12	APPLE	3000	3

(Product)

ORM →

MySQL

pid	pname	price	qty

(Product)

DB Configuration
1. oracle-hibernate.cfg.xml
2. mysql-hibernate.cfg.xml

Mapping information
Product.java
(No AutoGeneration of id value)

```
HB-21-InteractionwithMulitpleDB
  JRE System Library [JavaSE-1.8]
  src
    in.ineuron.cfg
      mysql-hibernate.cfg.xml
      oracle-hibernate.cfg.xml
    in.ineuron.dao
      ITransferDao.java
      ITransferDaoImpl.java
    in.ineuron.model
      Product.java
    in.ineuron.test
      InteractWithMultipleDB.java
    in.ineuron.util
      MySQLHibernateUtil.java
      OracleHibernateUtil.java
  hibernate-jar
  mysqlib
  oraclelib
```
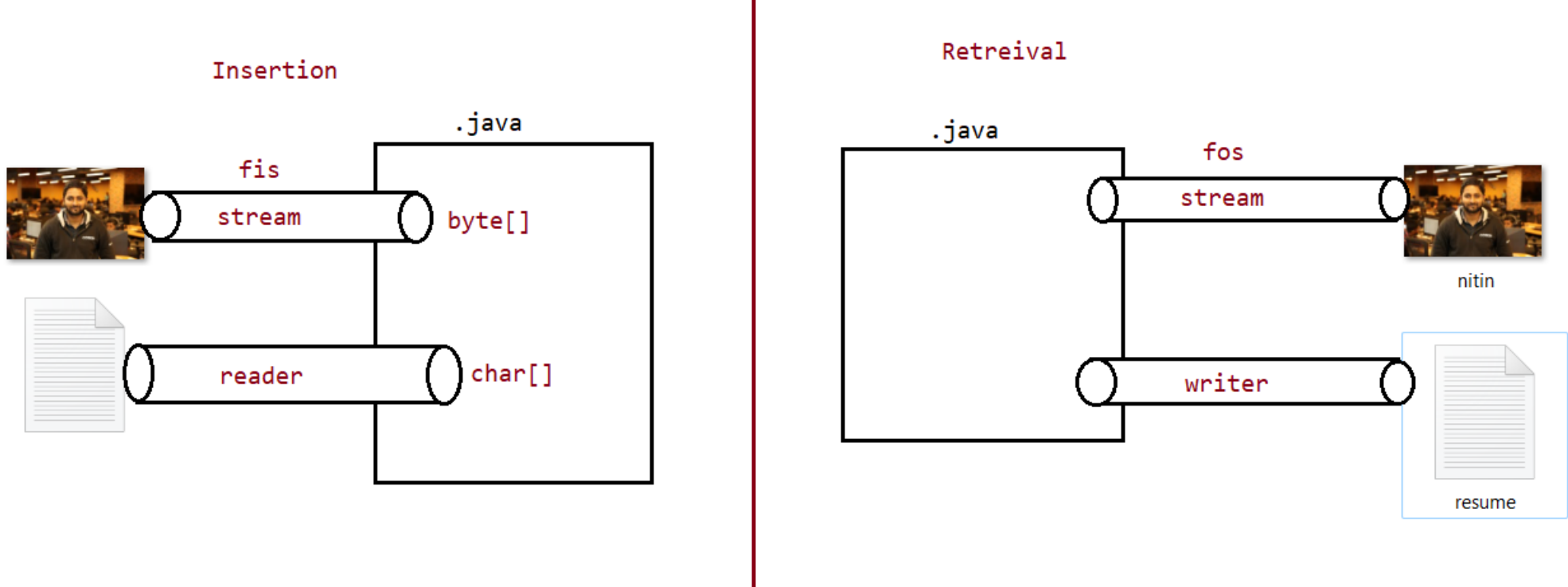

Insertion

.java

fis
stream → byte[]

reader → char[]

Retrieval

.java

fos
stream

nitin

writer

resume

```
HB-22-HibernateLobOperation
  JRE System Library [JavaSE-1.8]
  src
    in.ineuron.model
      JobSeeker.java
    in.ineuron.test
      InsertRecord.java
      SelectRecordApp.java
    in.ineuron.util
      HibernateUtil.java
      hibernate.cfg.xml
  hibernate-jar
  mysqlib
  store
    nitin.jpg
    resume.txt
```
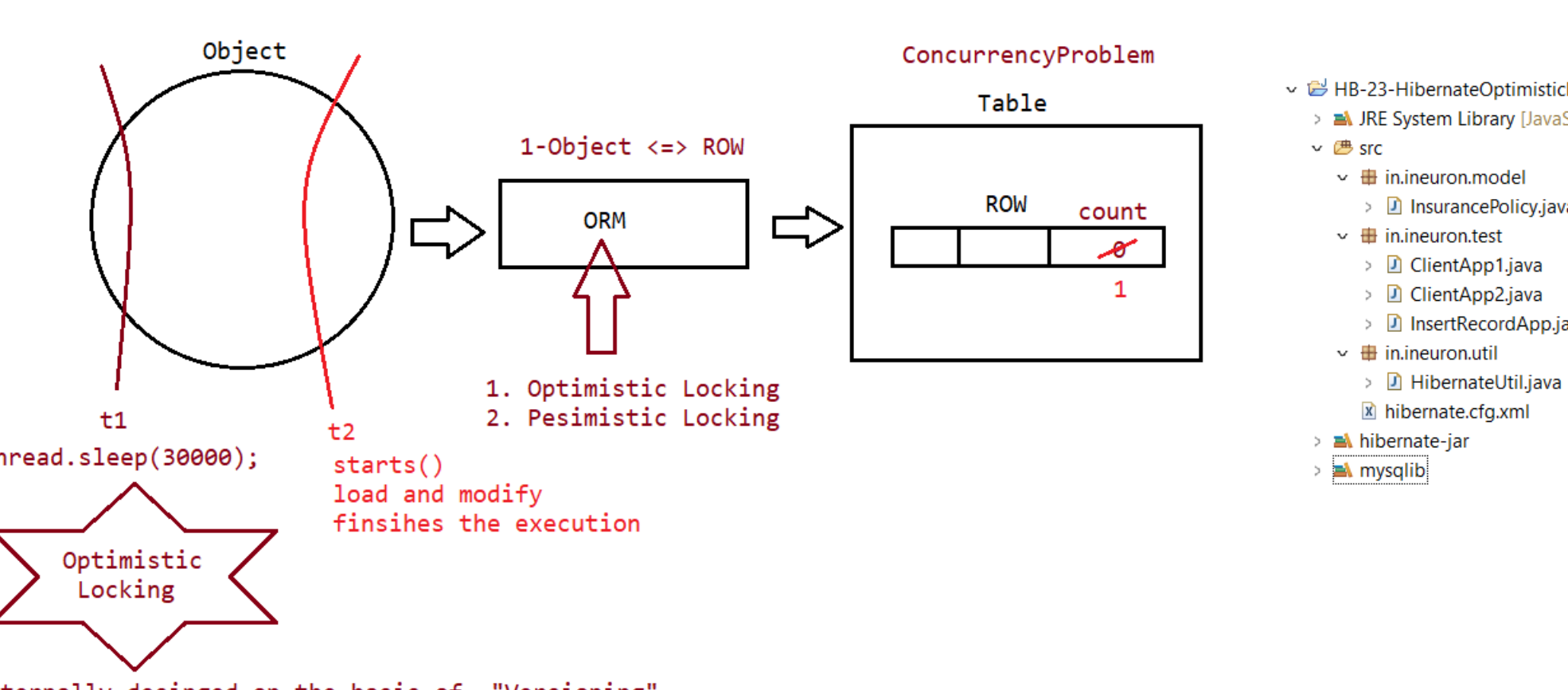

Locking in hibernate

Object

1-Object <=> ROW

ORM

1. Optimistic Locking
2. Pesimistic Locking

ConcurrencyProblem

Table

ROW   count
1

t1
Thread.sleep(30000);

t2
starts()
load and modify
finsihes the execution

Optimistic Locking

Internally desinged on the basis of "Versioning".

```
HB-23-HibernateOptimisticLocking
  JRE System Library [JavaSE-1.8]
  src
    in.ineuron.model
      InsurancePolicy.java
    in.ineuron.test
      ClientApp1.java
      ClientApp2.java
      InsertRecordApp.java
    in.ineuron.util
      HibernateUtil.java
      hibernate.cfg.xml
  hibernate-jar
  mysqlib
```

PesimisticLock

[Lock]   Object

1-Object <=> ROW

ORM

1. Optimistic Locking
2. Pesimistic Locking

ConcurrencyProblem

Table

ROW

t1
Thread.sleep(30000)
continue with execution
updates the value to 30

t2
starts()

Pesmistic Lock

```
HB-24-HibernatePesimiticLocking
  JRE System Library [JavaSE-1.8]
  src
    in.ineuron.model
      InsurancePolicy.java
    in.ineuron.test
      ClientApp1.java
      ClientApp2.java
      InsertRecordApp.java
    in.ineuron.util
      hibernate.cfg.xml
  hibernate-jar
  mysqlib
```

Single Row Operation

Object
id

ORM

Database
(SQL)
pkvalue

SRS to inform the orm tools to implement bulk operation

JPQL

HQL

EQL   IQL

Query will not be written rather query will be mapped to
a. tablename ====> entity name
b. columname ====> field name/property name

Bulk Operation

HQL

ORM

Database
(SQL)

Bulk Operation

Query<Product> query = session.createQuery("FROM in.ineuron.model.Product");

SQL

select
pid,pname,price,qty
from
products

HQL
dialect

referring to cfg details

Product ---> products
pid   ---> pid
pname ---> pname
price ---> price
qty   ---> qty

JDBC

query.list()

products

pid	pname	price	qty
1	fossil	15000	2
2	tissot	35000	3
3	omegha	55000	2
4	titan	8000	5

ResultSet

creating an object

0

1

2

3

List<Product>

given to

.java