# HotRod MyBatis Cheat Sheet

## Select by PK

```
UserDAO u = UserDAO.select(17);
```

*Available on tables with a PK.*

## Insert

```
UserDAO u = new UserDAO();
u.setUsername("jsmith");
u.setFirstName("John");
u.setLastName("Smith");
u.setGroupId(101);
u.setState(1);
u.insert();
```

*Available on all tables.*

## Update by PK

```
UserDAO u = UserDAO.select(17);
u.setFirstName("Jamie");
u.update();
```

*Available on tables with a PK.*

## Delete by PK

```
UserDAO u = new UserDAO();
u.setId(17);
u.delete();
```

*Available on tables with a PK.*

## Select by Unique Constraint

```
UserDAO u = UserDAO.
  selectByUIUsername("jsmith");
```

*Available on tables with unique constraints.*

## Auto-generated PK

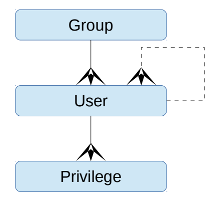
```
// Sequence (e.g. Oracle)
GroupDAO g = new GroupDAO();
g.setName("admin");
g.insert();
System.out.println("id=" + g.getId());
// shows the new id value
```

```
// Identity column (e.g. MySQL)
GroupDAO g = new GroupDAO();
g.setName("admin");
g.insert();
System.out.println("id=" + g.getId());
// shows the new id value
```

```
// Optional identity column (DB2)
GroupDAO g = new GroupDAO();
g.setId(123); // value 123 is forced!
g.setName("admin");
g.insert();
System.out.println("id=" + g.getId());
// shows the value 123
```

*Same method in Java. Available on tables with PK auto-generation specified in the config file.*

**Example Database**



## Select by Example

```
UserDAO example = new UserDAO();
example.setState(1); // Get active users
List<UserDAO> users = UserDAO.
  selectByExample(example);
```

*Available on tables and views.*

## Select by Example, with Order

```
UserDAO example = new UserDAO();
example.setState(1); // Get active users
List<UserDAO> users = UserDAO.
  selectByExample(example,
    UserOrderBy.LAST_NAME,
    UserOrderBy.FIRST_NAME);
```

*Available on tables and views.*

## Update by Example

```
// Deactivate all active users of group 78
UserDAO example = new UserDAO();
example.setState(1); // active
example.setGroup(78);
UserDAO newValues = new UserDAO();
newValues.setState(0); // inactive
UserDAO.updateByExample(example,
   newValues);
```

*Available on all tables.*

## Delete by Example

```
// Delete all inactive users
UserDAO example = new UserDAO();
example.setState(0); // inactive
UserDAO.deleteByExample(example);
```

*Available on all tables.*

## Transactions

```
TxManager tx = null;
try {
  tx = UserDAO.getTxManager();
  tx.begin();

  UserDAO u1 = UserDAO.select(12);
  u1.setGroup(204);
  u1.update(); // updates group to 204

  UserDAO u2 = UserDAO.select(17);
  u2.setGroup(252);
  u2.update(); // updates group to 252

  tx.commit();
} finally { // don't forget to free resources!
  if (tx != null) {
    tx.close();
  }
}
```

## Select Parent Row by FK

```
UserDAO u = UserDAO.select(17);
GroupDAO g = u.
  selectParentGroup().byGroupId();
```

*Available on tables with imported FKs.*

## Select Children Rows by FK

```
UserDAO u = UserDAO.select(17);
List<PrivilegeDAO> privs = u.
  selectChildrenPrivilege().
  byUserId();
```

*Available on tables with exported FKs.*

## Custom & Native SQL Select

```
// Get all privileges set by a user for all
// active users on a specific user group.
```

● In HotRod's configuration file:

```
<select java-class-name="ActivePrivilege">
 select
   u.uid, u.username, p.*
 from privilege p
 join user u on (u.id) = (p.user_id)
 {*
 where u.state = 1
 and u.group =
   #{group,javaType=java.lang.Long}
 and p.created_by =
   #{createdBy,javaType=java.lang.Long}
 *}
</select>
```

● In the java application:

```
List<ActivePrivilege> privs =
 ActivePrivilege.select(123, 5);
```

*Creates a new DAO java class. Complex, native, and/or dynamic SQL selects can be used. Specified parameters make up the list of method parameters. Available on all selects specified in the config file.*

## Update with Optimistic Lock

```
UserDAO u = UserDAO.select(17); // #1
u.setGroupId(102);
try {
 u.update(); // #2
 // Successfully updated
} catch (StaleDataException e) {
 // Row had been updated/deleted by
 // other process between steps #1 and #2
}
```

*Available on all tables with version control specified in the config file.*

## Delete with Optimistic Lock

```
UserDAO u = UserDAO.select(17); // #1
u.setGroupId(102);
try {
 u.delete(); // #2
 // Successfully deleted
} catch (StaleDataException e) {
 // Row had been updated/deleted by
 // other process between steps #1 and #2
}
```

*Available on all tables with version control specified in the config file.*

## Reflexive Select Parent by FK

```
UserDAO u = UserDAO.select(17);
UserDAO creator = u.
 selectParentUser().byCreatedBy();
```

*Available on tables with imported reflexive FKs.*

## Reflexive Select Children by FK

```
UserDAO u = UserDAO.select(17);
List<UserDAO> created = u.
 selectChildrenUser().byCreatedBy();
```

*Available on tables with exported reflexive FKs.*

## Custom & Native SQL Query

```
// Move all users without privileges to a
// specific user group
```

● In HotRod's configuration file:

```
<table name="user">
 ...
 <query java-method-name=
  "moveUnprivilegedUsers">
  update user u set group =
   #{group,javaType=java.lang.Long}
   where u.id not in (
    select id from privilege p
     where p.user_id = id)
 </query>
</select>
```

● In the java application:

```
UserDAO.moveUnprivilegedUsers(1041);
```

*Adds a new method to a DAO class. Can be added to any <table>, <view> and/or <dao> tags. Complex SQL, native SQL, and dynamic SQL can be used.*

## Select Sequence Value

```
// Get the value of sequence user_seq
```

● In HotRod's configuration file:

```
<table name="user">
 ...
 <sequence name="user_seq" />
</table>
```

● In the java application:

```
long value = UserDAO.
 selectSequenceUserSeq();
```

*Can be added to <table>, <view> and/or <dao> tags.*

## Dynamic SQL

```
// Get client orders by a dynamic criteria
```

● In HotRod's configuration file:

```
<select java-class-name="ClientOrder">
 <![CDATA[
  select c.id, c.name, o.* from client c
   join order o on (o.client_id) = (c.id)
   {*
   <where>
<if test="#{clientId,javaType=java.lang.Integer} != null">
  and c.id = #{clientId}
</if>
<if test="#{state,javaType=java.lang.String} != null">
  and c.state = #{state}
</if>
<if test="#{since,javaType=java.sql.Date} != null">
  and o.placed_at &gt; #{since}
</if>
   </where>
   *}
 ]]>
</select>
```

● In the java application:

```
List<ClientOrder> orders = ClientOrder.
   select(123, 5, Date.valueOf("2017-01-15"));
```

*Creates a new DAO java class. Complex joins and native SQL can be used. Supports inline parameters. Dynamic tags implemented by MyBatis.*