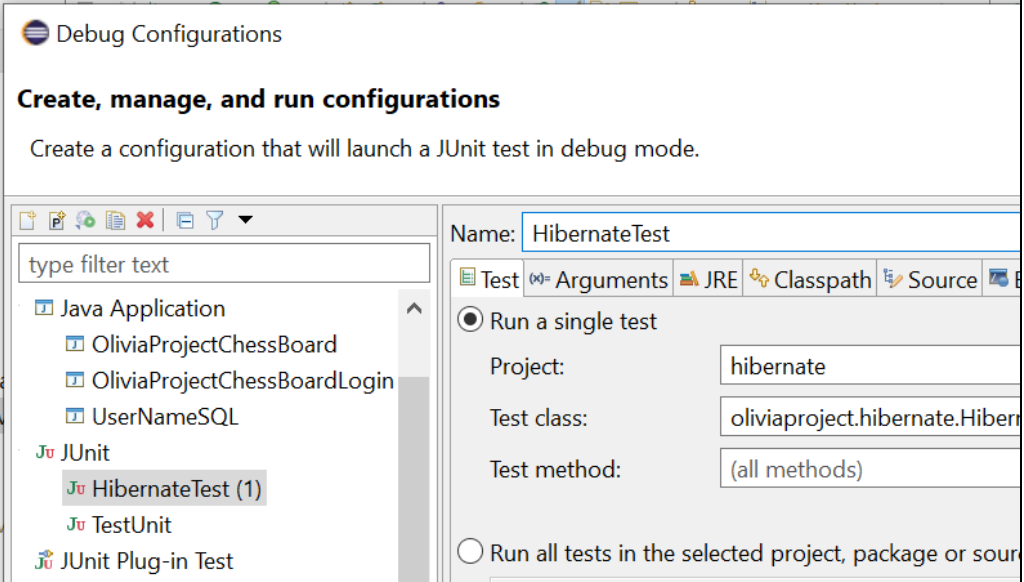


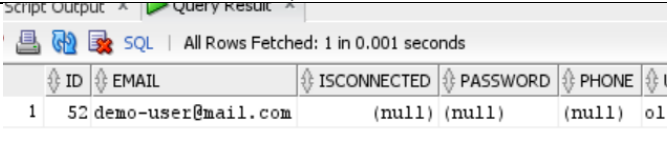
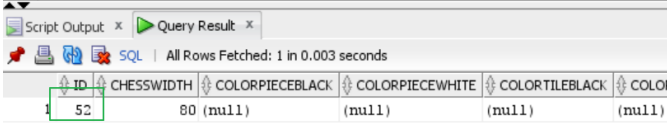
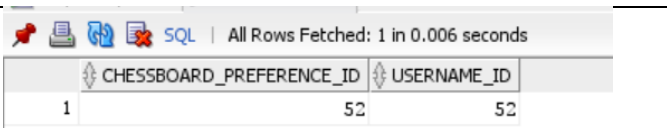
## OneToOne with foreign key on owner's table

N	Steps	Description
0		
1	Database	I used an oracle database and provided the configuration on the file in src>main>resources> hibernate.cfg.xml
2	Dependencie	You need to set in your PATH C:\tools\gradle-7.5.1 More: <a href="https://docs.gradle.org/7.5.1/release-notes.html">https://docs.gradle.org/7.5.1/release-notes.html</a>
3	Java	C:\Program Files\Java\jdk-18.0.2 This is because I played with hibernate-core and hibernate-common-annotations // <a href="https://mavenlibs.com/maven/pom/org.hibernate/hibernate-core">https://mavenlibs.com/maven/pom/org.hibernate/hibernate-core</a> implementation( 'org.hibernate:hibernate-core:6.1.2.Final' ) // <a href="https://mvnrepository.com/artifact/org.hibernate.common/hibernate-commons-annotations">https://mvnrepository.com/artifact/org.hibernate.common/hibernate-commons-annotations</a>
4	Eclipse project	Run gradle.bat eclipse. The dependencies should get sorted, except for ojdbc8.jar oracle library that is referred in build.gradle: <code>implementation( files("C:\\thirdparty\\ojdbc8.jar"))</code>
5	Launch the junit test via eclipse	Using 1 run configuration: oliviaproject.hibernate.foreignkey.HibernateForeignKeyTest 

		<div><div>ps-code-analysis - hibernate/src/test/java/oliviaproject/hibernate/HibernateTest.java - Eclipse SDK</div><div>le Edit Source Refactor Navigate Search Project Run Window Help</div><div><div>Package Explorer</div><div>Type Hierarchy</div><div>JUnit ×</div></div><div>ished after 7.498 seconds</div><div>uns: 1/1Errors: 0Failures: 0</div><div>oliviaproject.hibernate.HibernateTest [Runner: JUnit 4] (7.467 s)</div><div><div>HibernateTest.java</div><div>15</div><div>16private</div><div>17</div><div>18</div><div>19public</div><div>20try</div><div>21</div><div>22</div><div>23</div><div>24</div><div>25</div></div></div>																								
6	Result	<div><div><div>select * from foreignkeyusername;</div><div>The foreign key is on username</div><div>select * from foreignkeychessboardpreference;</div></div><div><div>Script Output ×Query Result ×</div><div>SQL   All Rows Fetched: 1 in 0.008 seconds</div><table><tr><th>ID</th><th>EMAIL</th><th>ISCONNECTED</th><th>PASSWORD</th><th>PHONE</th><th>USERNAME</th><th>CHESBOARD_PREFERENCE_ID</th></tr><tr><td>1</td><td>52 demo-user@mail.com</td><td>(null)</td><td>(null)</td><td>(null)</td><td>olivia</td><td>52</td></tr></table></div><div><div>select * from foreignkeychessboardpreference;</div><div><div>Script Output ×Query Result ×</div><div>SQL   All Rows Fetched: 1 in 0.003 seconds</div><table><tr><th>ID</th><th>CHESWIDTH</th><th>COLORPIECEBLACK</th><th>COLORPIECEWHITE</th><th>COLORTILEBLACK</th></tr><tr><td>1</td><td>52</td><td>80 (null)</td><td>(null)</td><td>(null)</td></tr></table></div></div></div>	ID	EMAIL	ISCONNECTED	PASSWORD	PHONE	USERNAME	CHESBOARD_PREFERENCE_ID	1	52 demo-user@mail.com	(null)	(null)	(null)	olivia	52	ID	CHESWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORTILEBLACK	1	52	80 (null)	(null)	(null)
ID	EMAIL	ISCONNECTED	PASSWORD	PHONE	USERNAME	CHESBOARD_PREFERENCE_ID																				
1	52 demo-user@mail.com	(null)	(null)	(null)	olivia	52																				
ID	CHESWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORTILEBLACK																						
1	52	80 (null)	(null)	(null)																						
7	You may need to reinitialize	<div>As I check for unicity of username.</div> <div>drop table foreignkeyusername cascade constraints; drop table foreignkeychessboardpreference cascade constraints;</div> <div>see database-schema.sql</div>																								

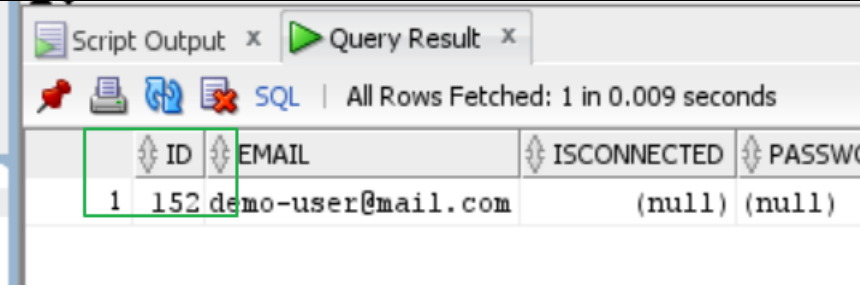
OneToOne with Jointable





N 0	Steps	Description
1	Run with	oliviaproject.hibernate.jointable.HibernateJointableTest

2	You may need to reinitialize	Reinitialisation with @OneToOne jointable: drop table jointableusername cascade constraints; drop table jointablechessboardpreference cascade constraints; drop table USERNAME_CHESSBOARDPREFERENCE cascade constraints; see database-schema.sql
3	jointableusername	
4	jointablechessboardpreference	
5	JOINTABLE_USERNAME_CHESSBOARDPREFERENCE	 So the join table makes the links between the 2 other tables.

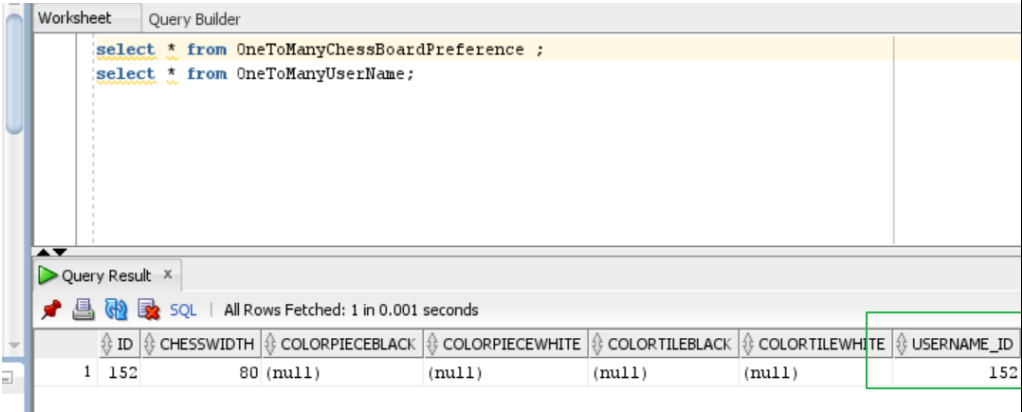
### OneToOne Using a Shared Primary Key

The third technique is something new that uses a shared key in both table

N	Steps	Description
0		
1	Debug configuration	HibernateSharedKeyTest
2	Reinitialization	drop table sharedkeyusername cascade constraints; drop table sharedkeychessboardpreference cascade constraints;
3	sharedkeyusername	

4	sharedkeychessboard preference	<div>Script Output x Query Result x</div> <div>    SQL   All Rows Fetched: 1 in 0.002 seconds</div> <table><tr><th>ID</th><th>CHESSWIDTH</th><th>COLORPIECEBLACK</th><th>COLORPIECEWHITE</th><th>COLORPIECEBLACK</th></tr><tr><td>1 152</td><td>80</td><td>(null)</td><td>(null)</td><td>(null)</td></tr></table>	ID	CHESSWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORPIECEBLACK	1 152	80	(null)	(null)	(null)
ID	CHESSWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORPIECEBLACK								
1 152	80	(null)	(null)	(null)								

## OneToMany

N 0	Steps	Description																
1	Run with	HibernateOneToManyForeignKeyTest																
2	Reinitialize	drop table OneToManyChessBoardPreference cascade constraints;  drop table OneToManyUserName cascade constraints;																
3	Result	<p>The foreign key is on the slave table.</p>  <p>The screenshot shows a database query result window. At the top, there's a 'Worksheet' tab and a 'Query Builder' tab. Below them, the SQL query is displayed: <code>select * from OneToManyChessBoardPreference ;</code> and <code>select * from OneToManyUserName;</code>. Below the query, there's a 'Query Result' window. It shows 'All Rows Fetched: 1 in 0.001 seconds'. Below that, there's a table with 8 columns: ID, CHESSWIDTH, COLORPIECEBLACK, COLORPIECEWHITE, COLORPIECEBLACK, COLORPIECEWHITE, USERNAME_ID, and USERNAME_ID. The first row has values: 1, 152, 80, (null), (null), (null), (null), and 152. The last column, USERNAME_ID, is highlighted with a green box.</p> <table><thead><tr><th>ID</th><th>CHESSWIDTH</th><th>COLORPIECEBLACK</th><th>COLORPIECEWHITE</th><th>COLORPIECEBLACK</th><th>COLORPIECEWHITE</th><th>USERNAME_ID</th><th>USERNAME_ID</th></tr></thead><tbody><tr><td>1</td><td>152</td><td>80</td><td>(null)</td><td>(null)</td><td>(null)</td><td>(null)</td><td>152</td></tr></tbody></table>	ID	CHESSWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORPIECEBLACK	COLORPIECEWHITE	USERNAME_ID	USERNAME_ID	1	152	80	(null)	(null)	(null)	(null)	152
ID	CHESSWIDTH	COLORPIECEBLACK	COLORPIECEWHITE	COLORPIECEBLACK	COLORPIECEWHITE	USERNAME_ID	USERNAME_ID											
1	152	80	(null)	(null)	(null)	(null)	152											

## OneToMany with manytoone: best setup

N0	Steps	Description
1	Run with	HibernateOneToManyBiDirectionalTest
2	Reinitialize	drop table OneToManyBiDirChessBoardPreference cascade constraints; drop table OneToManyBiDirUserName cascade constraints;
3	Result	The foreign key is on the slave table.