

## Basic JPA mappings

Sometimes, when I have to add a couple of mappings to the data model I have to spend a while to recall the correlation between JPA annotations and underlying database schema. I decided to create some kind of a cheat sheet with basic JPA mappings.

- One-to-one unidirectional

PK	FK	PK
HUMAN_ID	HUMAN_NAME	ANIMAL_ID
	unique	ANIMAL_ID
		ANIMAL_NAME
<pre>@Entity @Table(name = "human") public class Human {     @Id     @GeneratedValue     @Column(name = "human_id")     private long id;      @Column(name = "human_name")     private String name;      @OneToOne     @JoinColumn(name = "animal_id")     private Animal animal; }</pre>		<pre>@Entity @Table(name = "animal") public class Animal {     @Id     @GeneratedValue     @Column(name = "animal_id")     private long id;      @Column(name = "animal_name")     private String name; }</pre>

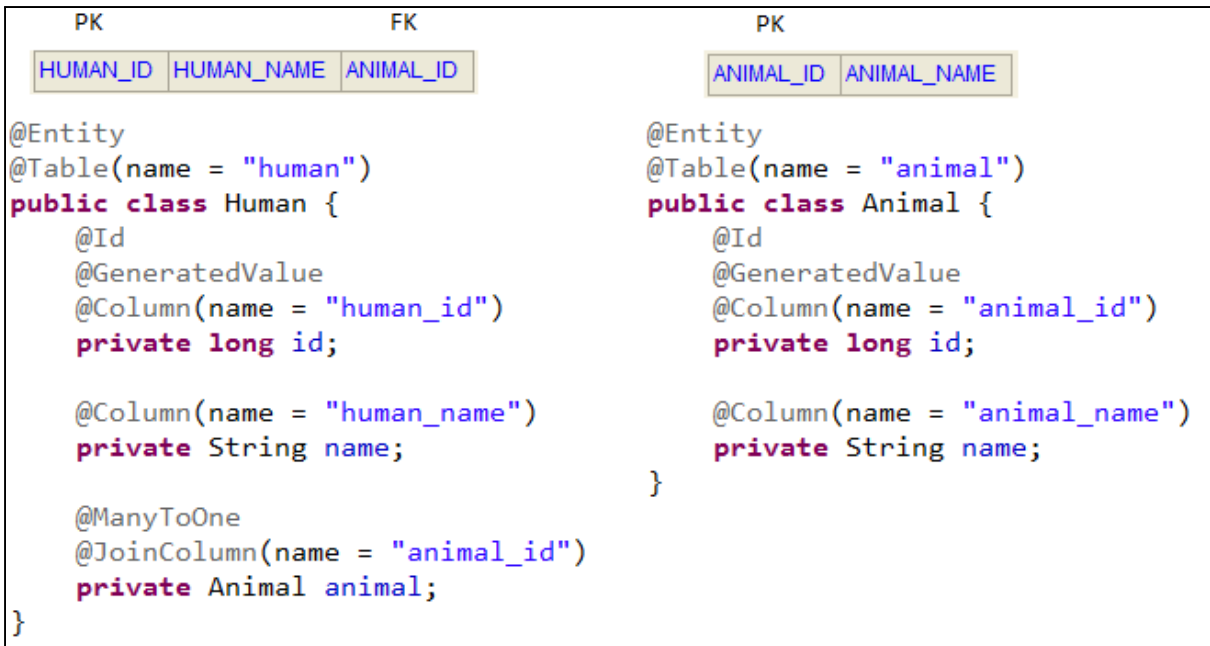
- One-to-one bidirectional (I)

<div> <div>PK</div> <div> <div>HUMAN_ID</div> <div>HUMAN_NAME</div> <div>ANIMAL_ID</div> </div> <div>unique</div> </div> <pre> @Entity @Table(name = "human") public class Human {     @Id     @GeneratedValue     @Column(name = "human_id")     private long id;      @Column(name = "human_name")     private String name;      @OneToOne     @JoinColumn(name = "animal_id")     private Animal animal; } </pre>	<div> <div>FK</div> </div>	<div> <div>PK</div> <div> <div>ANIMAL_ID</div> <div>ANIMAL_NAME</div> </div> </div> <pre> @Entity @Table(name = "animal") public class Animal {     @Id     @GeneratedValue     @Column(name = "animal_id")     private long id;      @Column(name = "animal_name")     private String name;      @OneToOne(mappedBy = "animal")     private Human human; } </pre>
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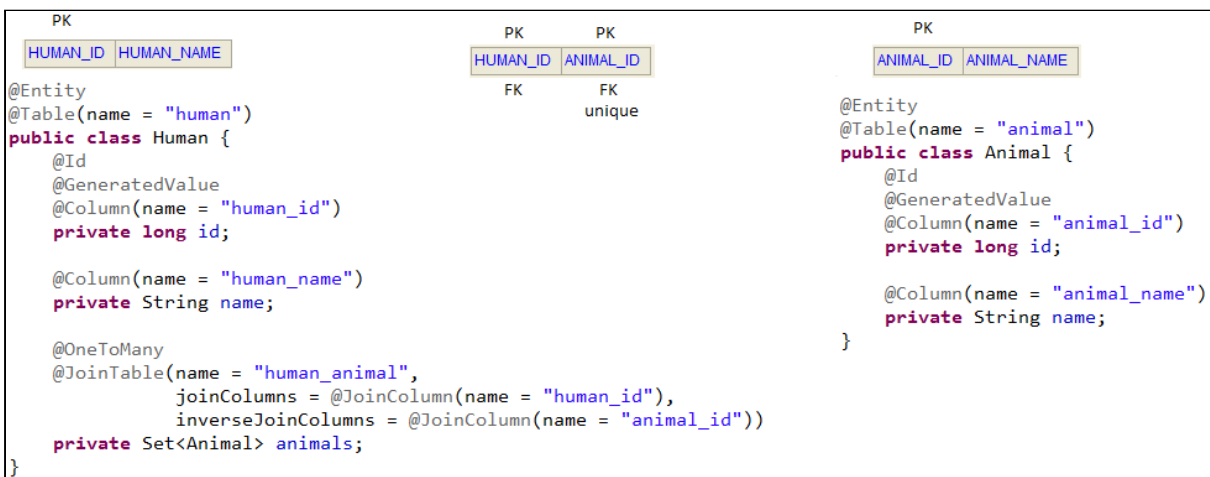
- One-to-one bidirectional (II)

<div> <div>PK</div> <div> <div>HUMAN_ID</div> <div>HUMAN_NAME</div> </div> </div> <pre> @Entity @Table(name = "human") public class Human {     @Id     @GeneratedValue     @Column(name = "human_id")     private long id;      @Column(name = "human_name")     private String name;      @OneToOne(mappedBy = "human")     private Animal animal; } </pre>	<div> <div>PK</div> <div> <div>ANIMAL_ID</div> <div>ANIMAL_NAME</div> <div>HUMAN_ID</div> </div> <div>unique</div> </div> <pre> @Entity @Table(name = "animal") public class Animal {     @Id     @GeneratedValue     @Column(name = "animal_id")     private long id;      @Column(name = "animal_name")     private String name;      @OneToOne     @JoinColumn(name = "human_id")     private Human human; } </pre>
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- Many-to-one



- One-to-many unidirectional



- One-to-many bidirectional

<div>PK</div> <div>HUMAN_ID HUMAN_NAME</div> <pre> @Entity @Table(name = "human") public class Human {     @Id     @GeneratedValue     @Column(name = "human_id")     private long id;      @Column(name = "human_name")     private String name;      @OneToMany(mappedBy = "human")     private Set&lt;Animal&gt; animals; } </pre>	<div>PK</div> <div>ANIMAL_ID ANIMAL_NAME</div> <div>FK</div> <div>HUMAN_ID</div> <pre> @Entity @Table(name = "animal") public class Animal {     @Id     @GeneratedValue     @Column(name = "animal_id")     private long id;      @Column(name = "animal_name")     private String name;      @ManyToOne     @JoinColumn(name = "human_id")     private Human human; } </pre>
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- Many-to-many

<div>PK</div> <div>HUMAN_ID HUMAN_NAME</div> <pre> @Entity @Table(name = "human") public class Human {     @Id     @GeneratedValue     @Column(name = "human_id")     private long id;      @Column(name = "human_name")     private String name;      @ManyToMany     @JoinTable(name = "human_animal",         joinColumns = @JoinColumn(name = "human_id"),         inverseJoinColumns = @JoinColumn(name = "animal_id"))     private Set&lt;Animal&gt; animals; } </pre>	<div>PK</div> <div>ANIMAL_ID ANIMAL_NAME</div> <div>FK</div> <div>HUMAN_ID</div> <div>FK</div> <div>ANIMAL_ID</div> <pre> @Entity @Table(name = "animal") public class Animal {     @Id     @GeneratedValue     @Column(name = "animal_id")     private long id;      @Column(name = "animal_name")     private String name;      @ManyToMany(mappedBy = "animals")     private Set&lt;Human&gt; humans; } </pre>
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fuentes <http://leakfromjavaheap.blogspot.com/2013/01/basic-jpa-mappings.html>