luv2code

Mapping - Sorted Sets

Sorted **Set**

Collection of items that contains no duplicates

When retrieved, sorted by a given field

Use Case for Sorted Sets

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- Examples
  - Waiting list: Who is the next customer in line?
  - Student ranking: Which student has the highest grade?

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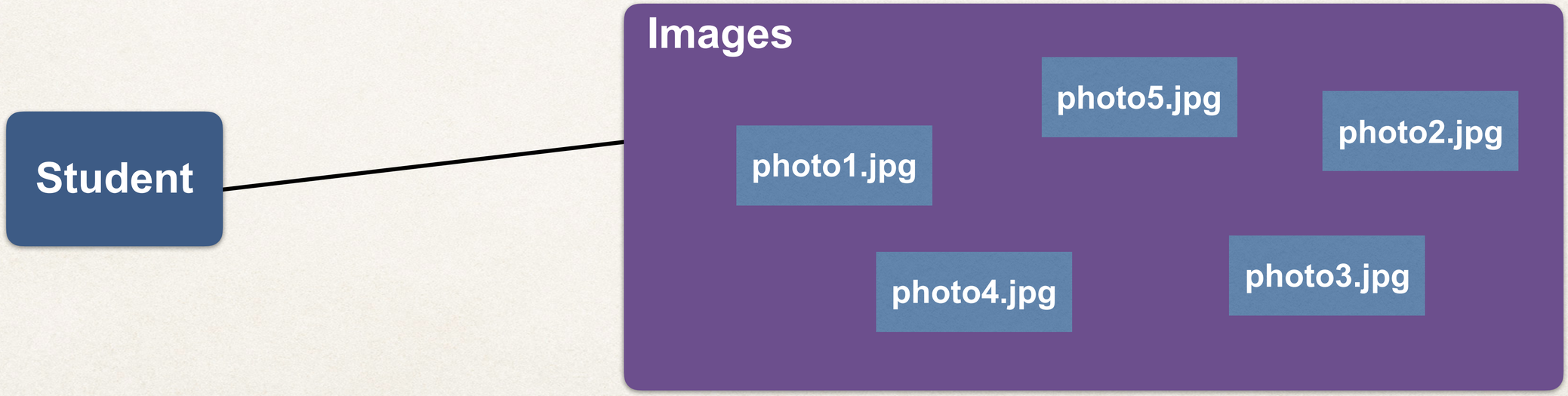
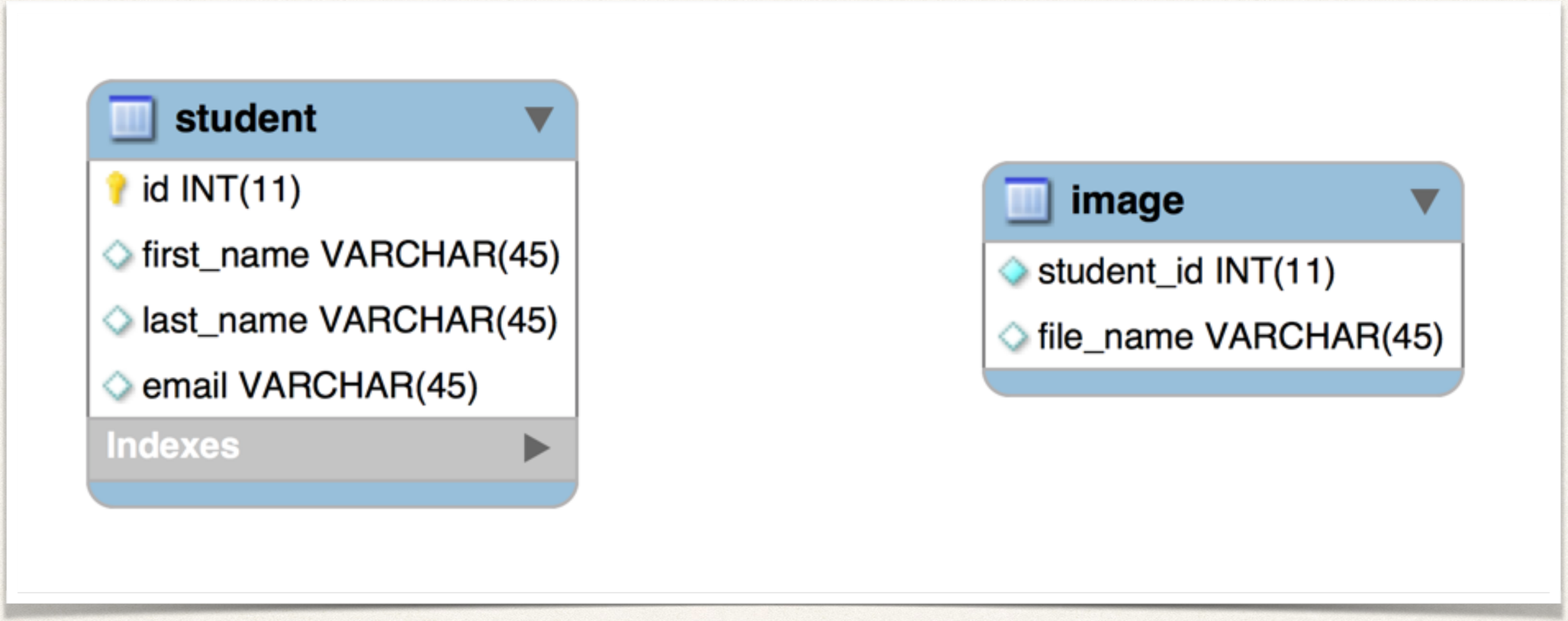


Database Diagram



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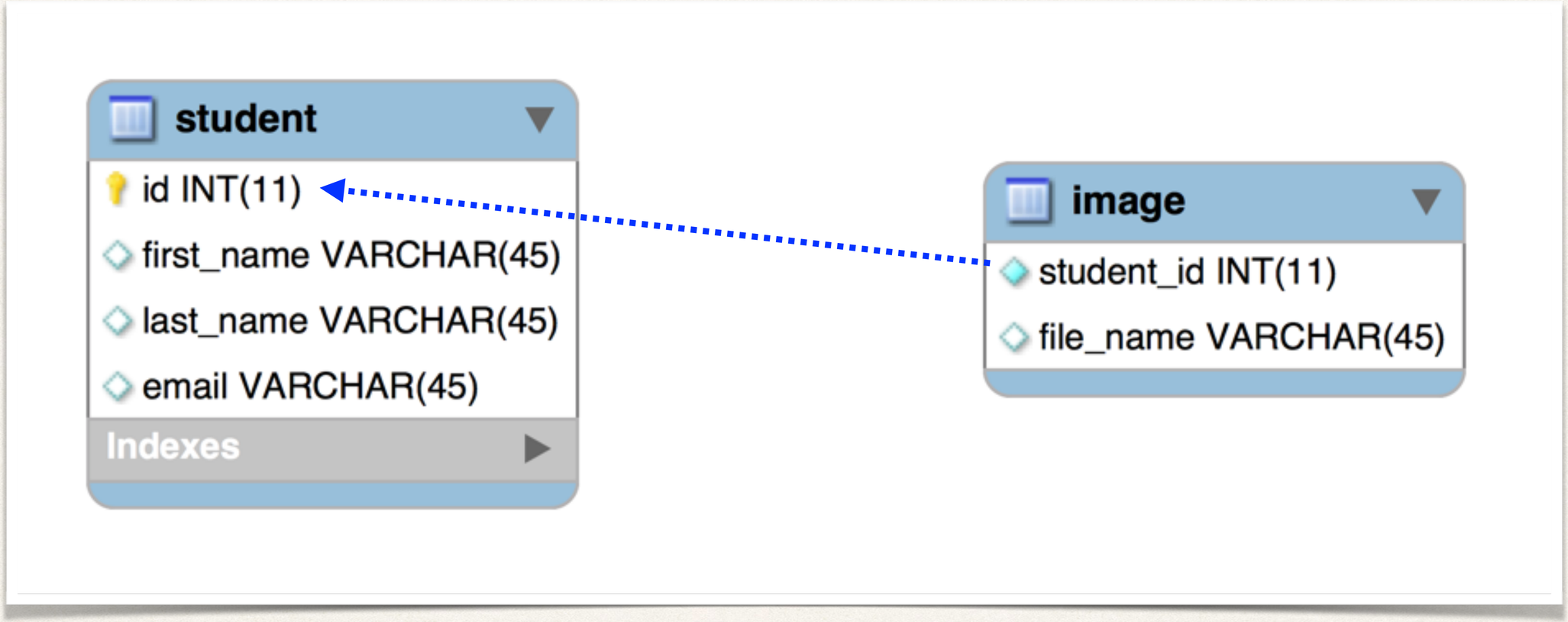

Development Process

Step-By-Step

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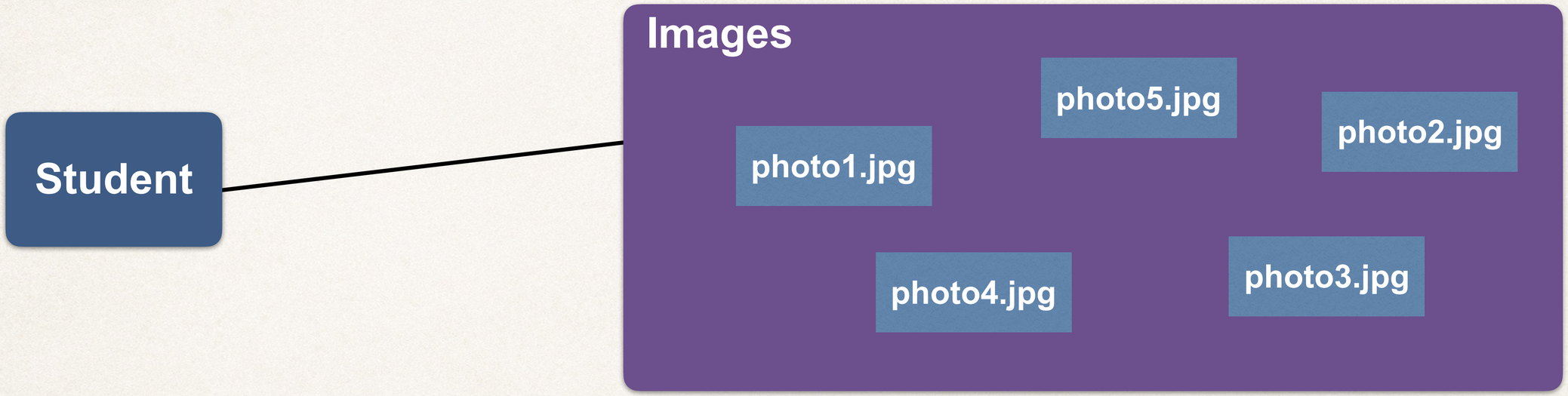

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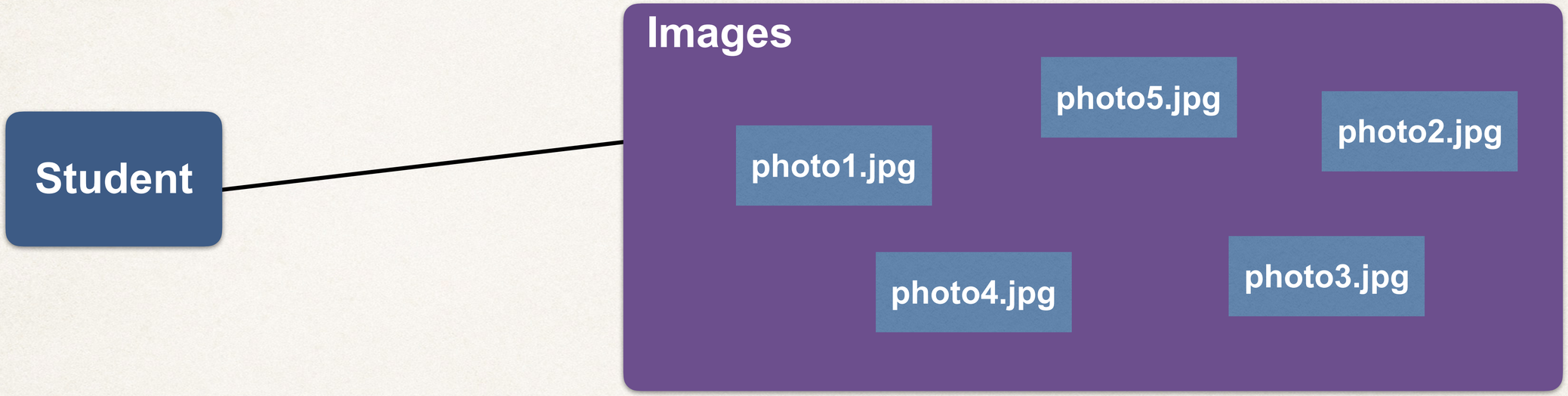


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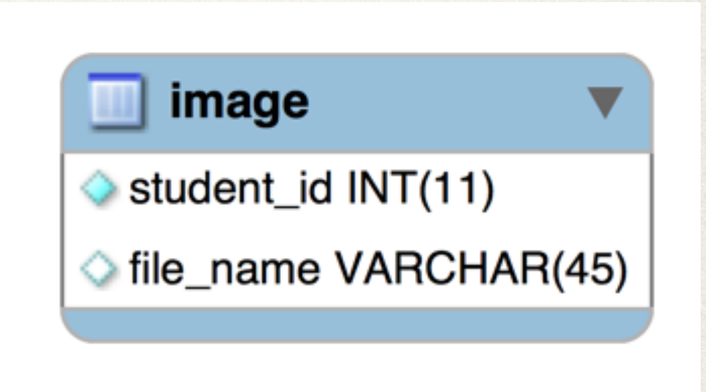
Example: `@OrderBy("file_name DESC")`

If ASC or DESC is not specified then ASC is the default

Mapping the Collection



Mapping the Collection

```
@Entity
@Table(name="student")
public class Student {

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  …
}
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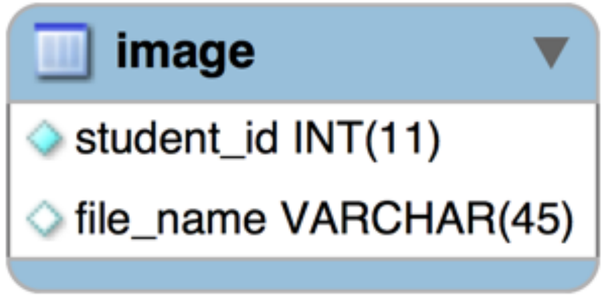

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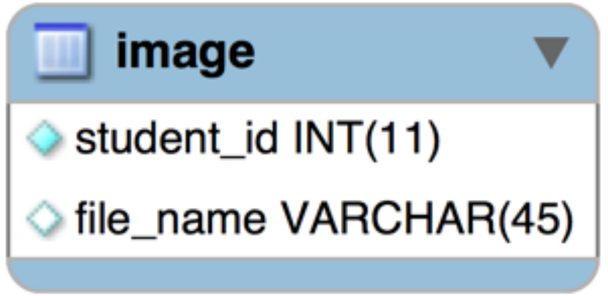

Mapping the Collection

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@Entity
@Table(name="student")
public class Student {

  …

  @ElementCollection
  @CollectionTable(name="image")
  @OrderBy("file_name DESC")
  @Column(name="file_name")
  private Set<String> images = new LinkedHashSet<String>();


  …
}
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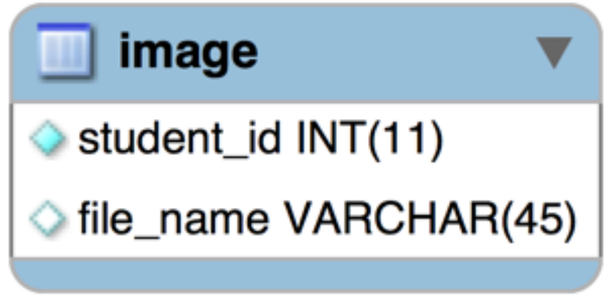

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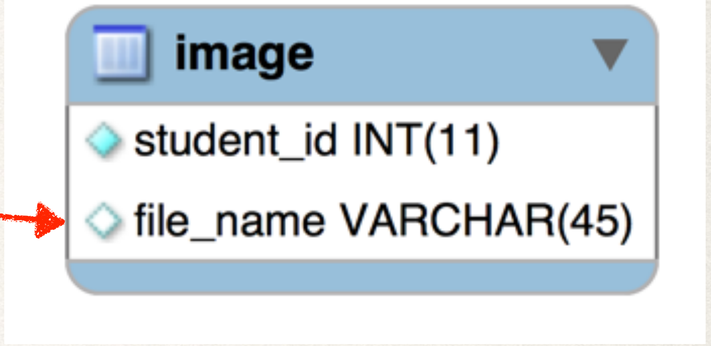
Sort by file_name when the images are retrieved



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Student tempStudent =  new Student("Paul", "Wall", "paul@luv2code.com");
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```

Get a reference
to the images collection

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CREATE THE IMAGES

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// create the object
Student tempStudent =  new Student("Paul", "Wall", "paul@luv2code.com");
Set<String> theImages = tempStudent.getImages();

theImages.add("photo1.jpg");
theImages.add("photo2.jpg");
theImages.add("photo3.jpg");
theImages.add("photo4.jpg");
theImages.add("photo5.jpg");
```

Now, let's add to the images collection

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// start a transaction
session.beginTransaction();

// save the object
System.out.println("Saving the student and images..");
session.persist(tempStudent);
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RETRIEVE THE IMAGES

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```
…
// get the student id
int theId = 1;
Student student = session.get(Student.class, theId);
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// get the student id
int theId = 1;
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// print the student detail
System.out.println("Student details: " + student);
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// print the associated images
System.out.println("The associated images: " + student.getImages());
…
```

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Table: student

id	email	first_name	last_name
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Console output

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Hibernate: select images0_.Student_id as Student_1_0_0_, images0_.file_name as file_nam2_0_0_ from image images0_
where images0_.Student_id=? order by images0_.file_name desc

The associated images: [photo5.jpg, photo4.jpg, photo3.jpg, photo2.jpg, photo1.jpg]
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