

CSE 113 A

April 4 - 8, 2011

Announcements - Grades

- ⚙ There have been no updates to UBLearn since 3/28, but if you have an issue that you have not reported to me, please do make sure to report it and/or come to see me about it.



Announcements - Lab

- ⚙ Lab 8 started in lab this week.
- ⚙ Labs 6, 7, 8 will be graded by Web-CAT, but the grading is not functional at this time.
- ⚙ Practice Assignment 6 has been posted and grading is functional.
- ⚙ Practice Assignments 7 & 8 will be posted at some point soon.



Announcements – Practical Exam 3

- ⚙ May 5, 6, 9, 10
- ⚙ Schedule will be posted on the Practical Exam 3 information page (which will be linked off of the Schedule page).
- ⚙ Information about what material will be on the exam is also posted there.



Announcements – Exams

- ⊗ Pick up Exam 1 & 2 if you have not already done so.
- ⊗ Exam 3 Monday, April 11th in lecture (covers Chapters 6-8).
- ⊗ Review for Exam 3 on Friday, April 8th.
- ⊗ Review sheet posted.



Lab 8 Tips

- ⊗ Create a method inside Obstacle named `getImageName`.
 - ⊗ The return type of this method should be `String`.
 - ⊗ The method takes no parameters.
 - ⊗ Inside the method, you should “return” the instance variable that stores the string that represents the name of the image file that the obstacle displays.
 - ⊗ If you don't have an instance variable storing this information, you need to create one.



Lab 8 Tips

```
public String getImageName() {  
    return imageName;  
}
```



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Typecasting

- ⊗ Explicitly coding into a program to convert the type of an object to some other type.
- ⊗ Must be used carefully.



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Checking for Intersections

```
Actor a = getOneIntersectingObject(Obstacle.class);
```

```
if(a != null) {
```

```
    ...
```

```
}
```

⚙ **a** is an Actor (Notice it's type)

⚙ But we also know **a** is an Obstacle. How?

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So....

⚙ We could typecast **a** to be an Obstacle instead of an Actor.

```
Actor a = getOneIntersectingObject(Obstacle.class);
```

```
If(a != null) {
```

```
    Obstacle obs = (Obstacle) a;
```

```
    ...
```

Typecast

```
}
```

⚙ **obs** is an Obstacle

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Why would we do this?

- ⚙ With the variable `a`, we can call any methods from **Actor** on the `a` object.
- ⚙ BUT
- ⚙ We can't call any methods from **Obstacle**.
- ⚙ With the variable `obs`, we can call methods from BOTH **Actor** and **Obstacle**.



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OK – So What?

- ⚙ `getImageName` is only defined in Obstacle (NOT Actor)
- ⚙ We will need to call that method to determine which type of obstacle the hero has run into during the course of the game.



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Equals Method

- ⊗ Once we have gotten our image name from the obstacle, we will need to compare it to known image names to determine which type of object we collided with.
- ⊗ We will use the **equals** method from the String class to do this.



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Example

```
Actor a = getOneIntersectingObject(Obstacle.class);  
if(a != null) {  
    Obstacle obs = (Obstacle) a;  
    String image = obs.getImageName();  
    if(image.equals("shamrock.png") {  
        ...  
    }  
    ...  
}
```



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Back to fun with Images

- ⚙ New actor in our drawing scenario
 - ⚙ Gets inserted into the world at random times at random locations.
 - ⚙ When inserted, it starts off small and begins to grow.
 - ⚙ When it reaches a certain size, it disappears and puts n more Square objects into the world.

