

# Giant Cow Games

## Darkmatter

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# Outline

## Introduction

- Inspiration
- Darkmatter

## Game Time

## Extreme Programming

- Pair Programming
- Test-Driven Development
- Maven

## Lessons Learned



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## Extreme Programming

Pair Programming

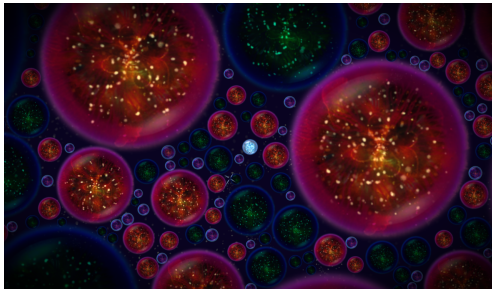
Test-Driven Development

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# Osmos



A beautiful puzzle game created by Hemisphere games.



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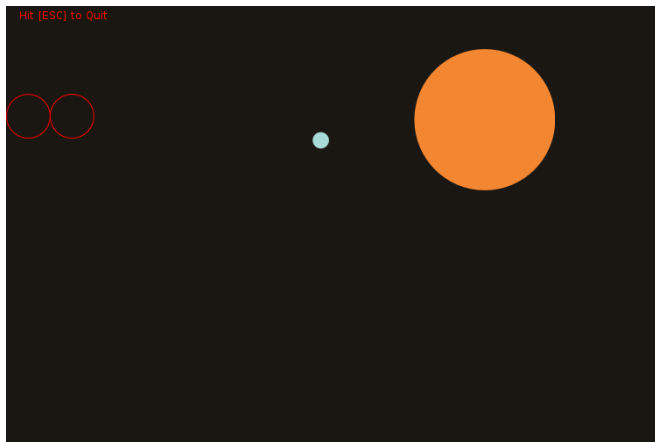
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# Early Prototype



# Final Version



# The Future



## Enhancements

- ▶ Defensive power-ups
- ▶ Co-op mode
- ▶ Completing missions





And here we go...



## Why XP?

- ▶ Release early & release often  
We built a small core and added functionality feature by feature.
- ▶ Collective code ownership  
We are all responsible for fixing bugs in any file.
- ▶ Planning game  
We all had a sense of how much effort a feature required.



## But we weren't perfect

- ▶ *Not as many release as we aimed for.*  
Hard to remember to create tags whenever a feature milestone was reached.
- ▶ We coded our *unit tests after our features*.  
New domain = exploratory coding.
- ▶ *No overtime.*  
We can't push back client deadlines.



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# Weekly Meetings

	Tuesday	Thursday
10:00	Team Meeting	
11:00	Sessions One	
12:00		Session Two
13:00		
14:00		Session Three
15:00		Demonstrator Meeting



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# Declaring intent

- ▶ 1 test for every 75 lines of code.
- ▶ Added new test when we found a bug.  
*Example:* conflating radius and diameter.



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## Or when building became easy

- ▶ Automatic dependency resolution
- ▶ Supported in all IDEs
- ▶ Built in unit testing & documentation generation

```

|- src
| |- main
| | |- java
| | | |- com
| | | | '- giantcow
| | | | '- darkmatter
| | | | |- level
| | | | |- net
| | | | '- player
| | '- resources
| '- test
|- java
| | '- com
| | '- giantcow
| | '- darkmatter
| | |- level
| | |- net
| | '- player

```



# Mistakes

- ▶ We needed to *communicate more*.  
Team leader disappeared and the void was never officially filled.
- ▶ Making code assignments *explicit*.  
Ambiguity of responsibility caused code to go unwritten longer than it should have.
- ▶ Missed meetings and pair programming sessions.  
We let deadlines get in the way of our sessions together.



## The take away

- ▶ Working in a team is hard.
- ▶ Creating a final product requires a lot from the whole team.
- ▶ Constant forward momentum.



# Summary

- ▶ Game programming is rewarding but hard.
- ▶ Team work requires compromise and dedication.

