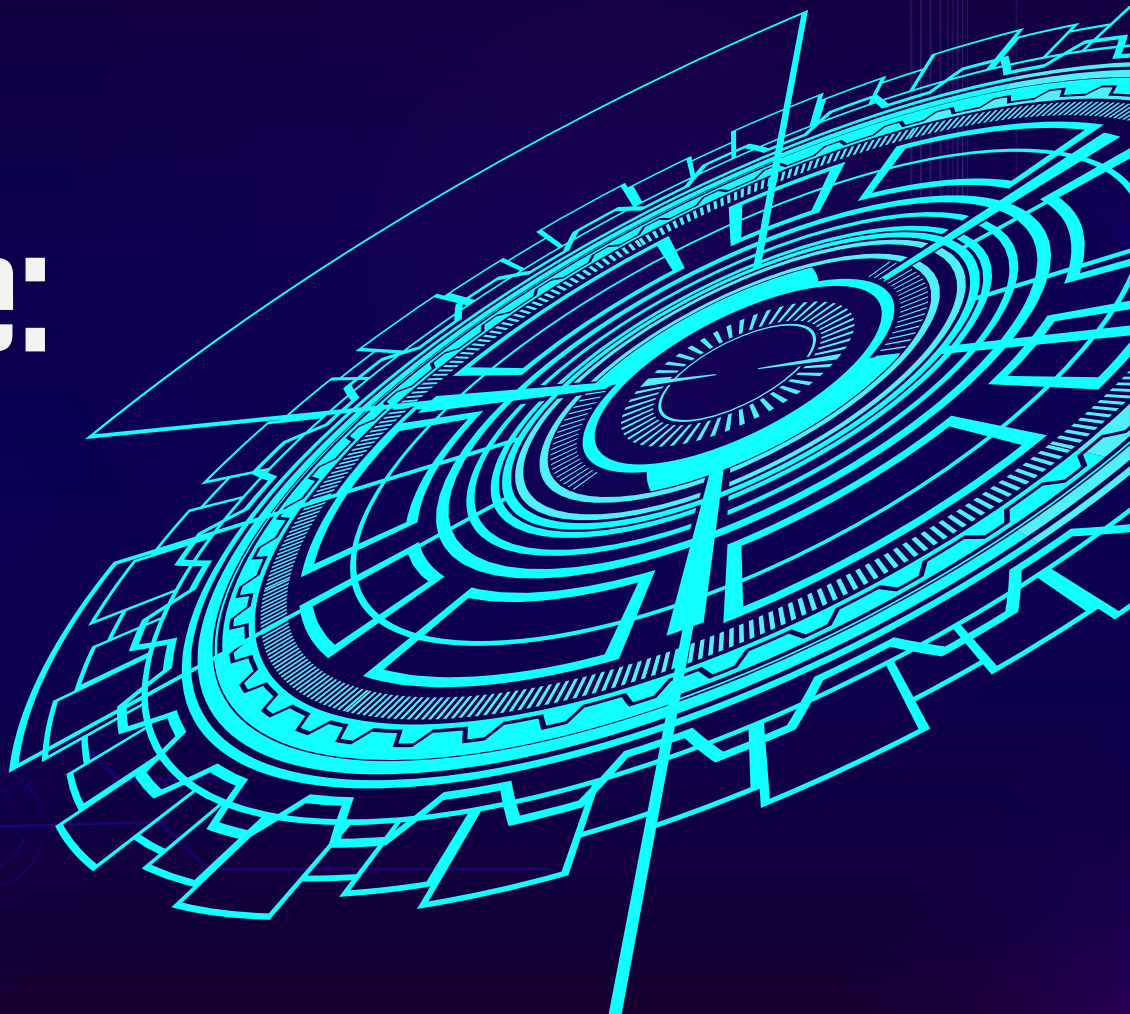
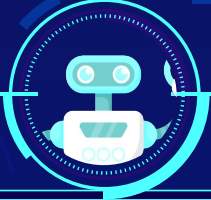


Star Battle: Davinci



OUR TEAM



Biniam Hailu

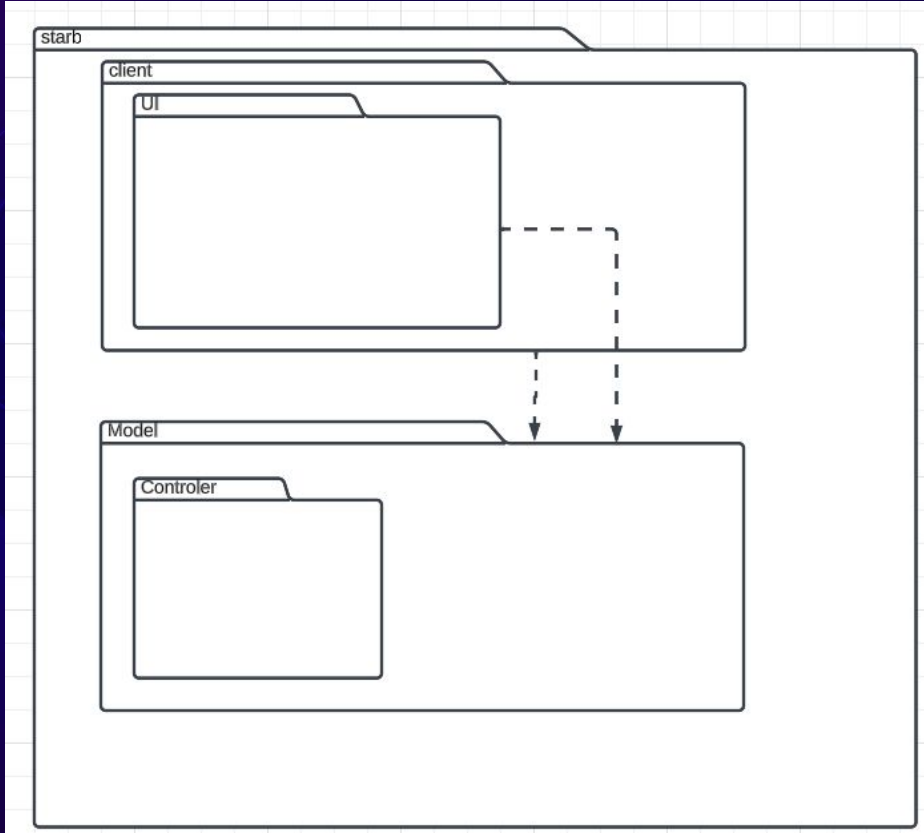


Vincent Allen Sison



Yonatan Bayeh

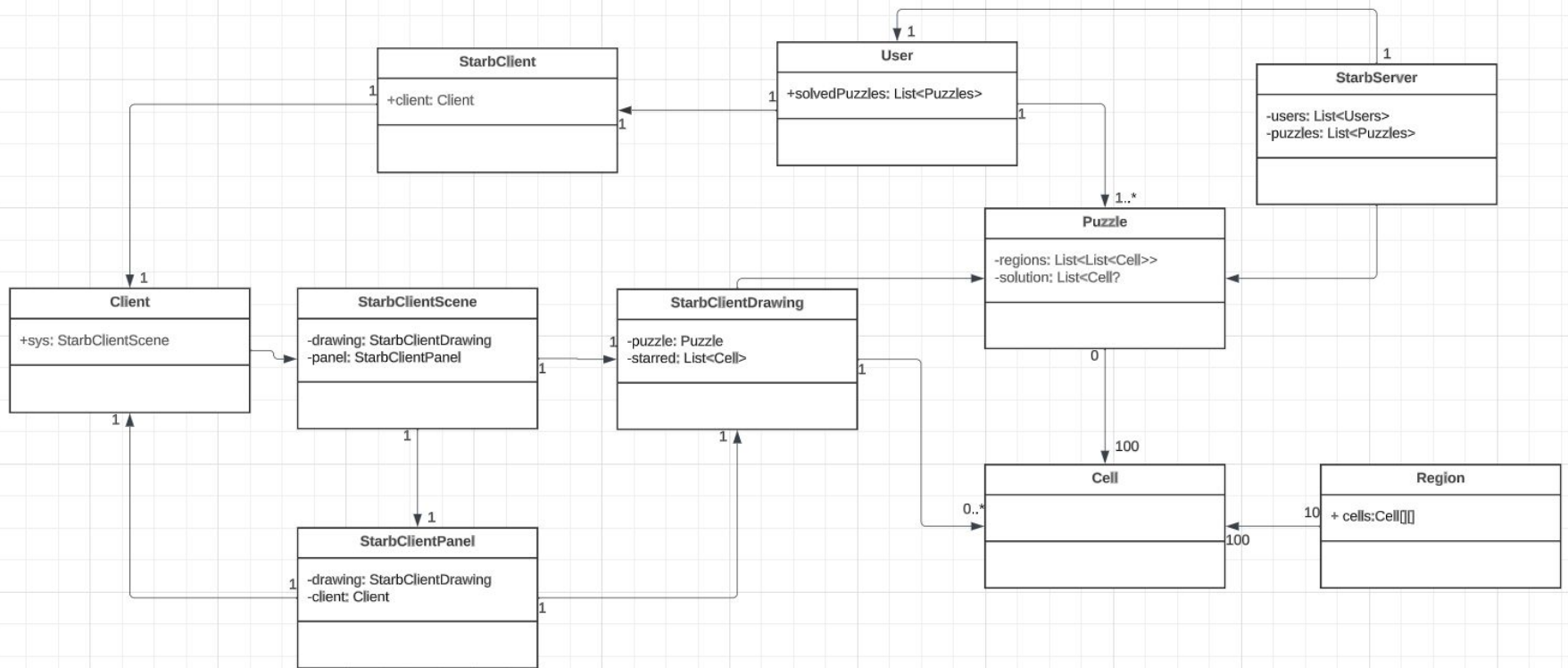
Package Diagram



Layers:

- 2 Layers: Client Layer and Model Layer
- Used layers to separate the Client and Server
- UI can access the controller, but not the other way around
- Less coupling as it keeps classes separate and prevents interaction between client and model

CLASS DIAGRAM



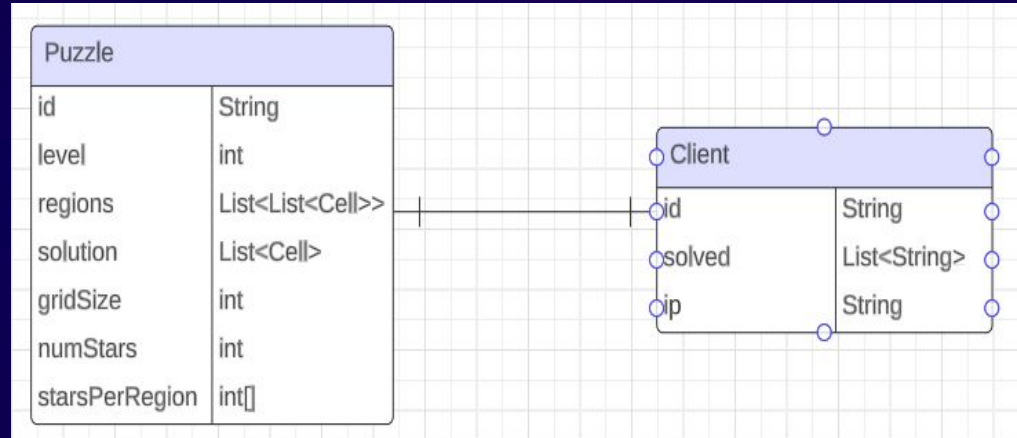
Database Design

What Collections did we use?

- Puzzles
- Client

How were they mapped to objects?

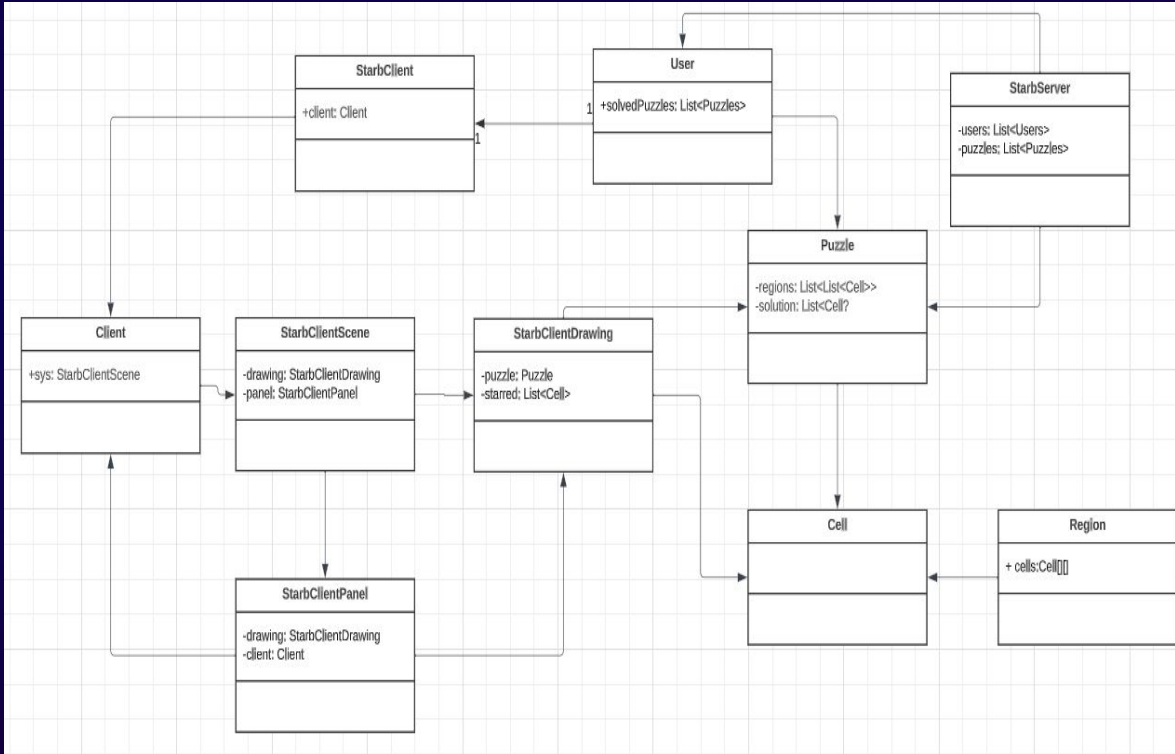
- The Puzzle and Cell classes are mapped to JSON using Jackson annotations.





**How did we implement our design to
support future changes?**

Supporting Future Changes



How?

- Create separate classes to handle different aspects
- Different Classes = Easier to manipulate
- Made sure that one object doesn't call on multiple classes
 - Less Coupling
 - High Cohesion
- Separate Client and Model = less interactions

Supporting Future Changes

How?

- Less Coupling:
 - Makes objects reusable
 - Easier to call
- High Cohesion:
 - Code is easier to understand
 - Documentation is easier and changes are faster to make.

In Our StarbClientDrawing:

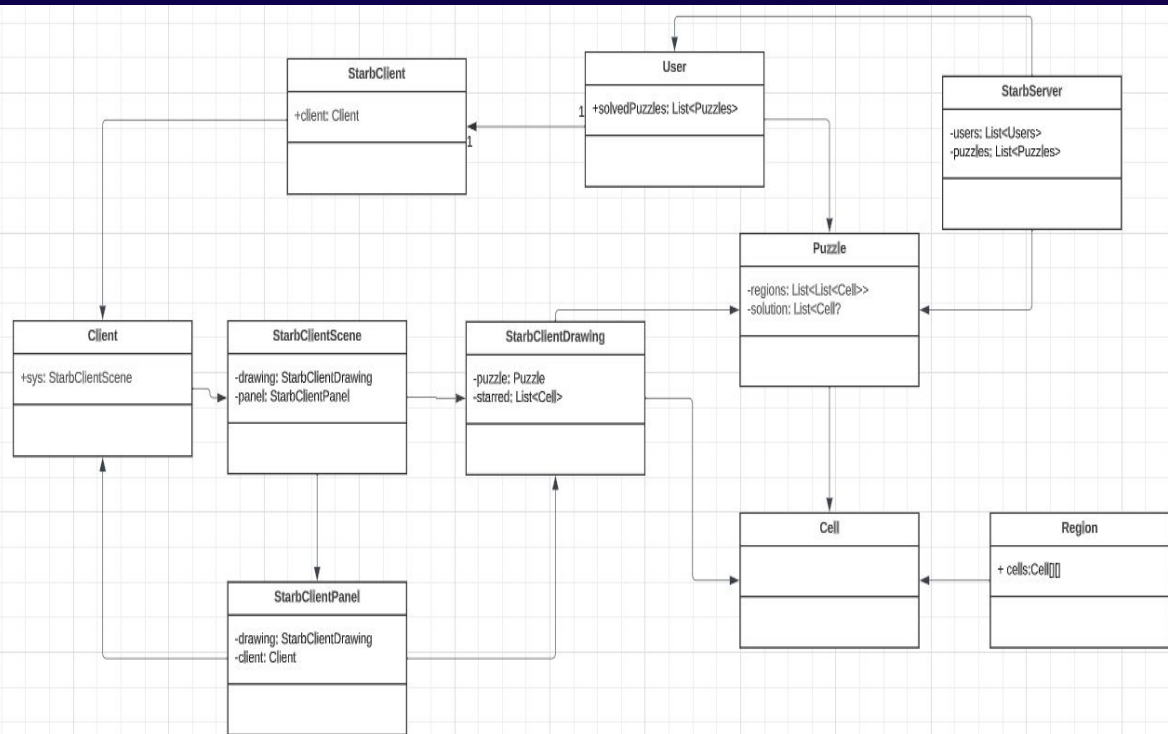
```
private Puzzle puzzle;
```

```
public List<Cell> starred = new ArrayList<>();
```

Some parts of our removeStar method:

```
if (starred.contains(new Cell(row, col))) starred.remove(new Cell(row, col));  
puzzle.updateStarredRegion(new Cell(row, col), i: -1);  
isOccupied[row][col] = false;  
cols[col] -= 1;  
rows[row] -= 1;
```


Issues for future Changes



Issues:

- Could lead to high coupling
- Since most of the classes are connected, it's possible to call on a class through another class
- High coupling = low cohesion
- Only a possible issue, not a big issue



Our Process

What was our initial process? (Iteration 1 Process)

1. Meet at the beginning of each iteration
2. Made tasks for each person
3. Work on our tasks
4. Meet 1 more to give updates.
5. Push to repository in final day

Issues with the Process

- We didn't meet as much as we should have.
- Tasks weren't handled properly
 - Tasks and code clashed with each other
- Worked separately, only together towards the end
- Rushed to finish

Final Process(Iterations 2-4)

DAY 1

First Meeting:
Assign tasks

DAY 2

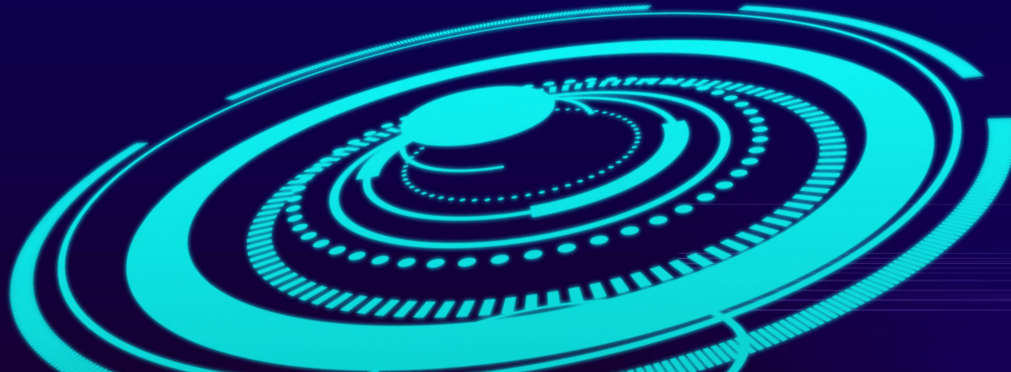
Second Meeting:
Update each other
on our progress

DAY 3

Third Meeting: Work
together to make
sure our tasks were
completed

DAY 4

Final Meeting:
Meet one last
time to place
finishing touches





**What changes would we make to our overall
Design?**

Changes to our Game:

- Implement another UI to handle the levels
- Place description between classes for better documentation
- Make the row and columns show the invalid spaces
- Create a Hint Button
- Outline an unused region
- For fun: Place music in the background

Changes



Demo