

# Sprint 1 Features Implemented

We were able to implement and test all the features we listed in our project plan for the first sprint, with the exception of the features which we discovered were unnecessary.

- Board Skeleton
  - We planned to implement a board skeleton, consisting of a set of grouped identical hexagons in the shape specified in the project handbook. We successfully did this with two methods: createHex and makeBoard. These functions are implemented in javaFX to create the graphical output for the board, with the makeBoard repeatedly calling createHex and collecting each hexagon to form the board.
  - We tested our functions for generating hexagons, and the entire board. We tested the expected properties of the hexagons, including colour, coordinates, points and view order, and we consistently passed each of our implemented tests.
- Atom Generation
  - We planned to implement the random generation and placement of atoms, and succeeded in our implementation of our createAtom and makeBoard methods. Our makeBoard method, as it generates its hexagons, also generates atoms at 4 different random positions on the board. Additionally, each atom has its own associated circle of influence.
  - We tested our function for generating atoms similarly to how we tested our hexagons. They similarly exist as javaFX objects so we looked at their position, view order, colour. However we had to manually test the random placement, as we couldn't automatically detect every possible pattern, so we repeatedly created the board and saw unique atom positions each time.
- Ray input
  - We planned to implement a user interface which would allow users to select a location for ray input, and we decided to do this in the form of a text box which displays after clicking a start button. We currently do not have labels for ray input locations, as they weren't necessary to get user input, and we believe it may be more important for us to define these while implementing ray logic in future sprints.
    - We briefly mentioned making it easy for future players to swap sides in our project plan, but recently found out that the intention was for the game to be single player, so we have adjusted our project plan accordingly, and removed this feature.
  - We had to test this function manually, to see if our input was being accurately displayed. We could see clearly that we were able to print any input which we passed through our text box, achieving our goals for this sprint.

We additionally removed features for multiple rounds and players switching from experimenter to setter from our later sprints, due to the singleplayer requirement.