

# Black Box

## Sprint 2

### Group 42: FORTYTWO

Names	Student Numbers
Patrick Buckley	22365936
Artjom Kucajev	22385231
Jamie Parke	22483136

**Git repository:** <https://github.com/jamie6084/SoftwareProject.git>

"In the second sprint of our project, each team member played a pivotal role, contributing their unique skills and perspectives to ensure our collective success. Our collaboration was marked by equal participation, with everyone actively involved in every aspect of the project. This balanced approach has been instrumental in achieving our initial milestones."

Objectives	Tasks	Results
<b>From original sprint 2:</b> <ul style="list-style-type: none"><li>- Continue on core game mechanics</li><li>- Ray inputs</li><li>- Ray reaction to atoms - Ray visibility</li></ul> <b>Sprint 3 features completed:</b> <ul style="list-style-type: none"><li>- Enhancing the ray mechanics</li></ul> <b>Also:</b> <ul style="list-style-type: none"><li>-Main menu</li></ul>	<b>From original sprint 2:</b> <ul style="list-style-type: none"><li>- Add the feature for the user to input the ray.</li><li>- Add the feature when a ray does not meet with any atoms.</li><li>- Add the feature when a ray comes in contact with an atom and returns.</li><li>- Add the feature when a ray comes in contact with an atom and reflects with an angle of 60 degrees.</li></ul> <b>Sprint 3 features completed:</b> <ul style="list-style-type: none"><li>- Add the feature that when the ray comes into contact with 1 or more atoms, it gets reflected at 120 degrees.</li><li>- Add the feature that if a ray comes in contact with an atom at the edge of the board it is reflected.</li></ul> <b>Also:</b> <ul style="list-style-type: none"><li>-create main menu</li></ul>	<b>From original sprint 2:</b> <ul style="list-style-type: none"><li>- Can now input a ray. (Using mouse click)</li><li>- Ray can be reflected if coming in contact with an atom.</li><li>- Can see the path of the ray for testing purposes.</li></ul> <b>Sprint 3 features completed:</b> <ul style="list-style-type: none"><li>-Most abnormal cases complete.</li></ul> <b>Also:</b> <ul style="list-style-type: none"><li>-Created main menu</li></ul>

# Black Box

## Sprint 2

### Breakdown

This sprint was mainly focused on implementing the rays as that is a crucial part of the game.

A border was added which is used for inputting ray(and ray markers in future).

Rays were implemented, now being able to click on a position on the border to send a ray in that direction.

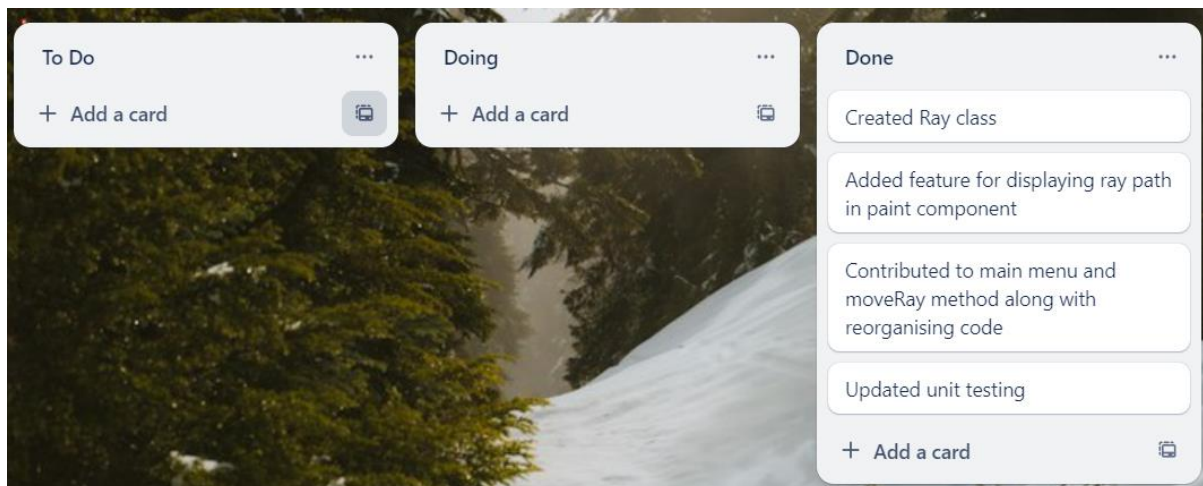
The ray path is shown on screen which was helpful for implementation but will be removed. Ray entry/exit points are correctly calculated which will be used for border markers.

We also thought that incorporating a main menu and rules would be quite beneficial for our game. We used JFrame and JPanel for the main menu and rules screen.

[See Implementation and Testing file for more details.](#)

### Trello Kanban Boards

Patrick



# Black Box

## Sprint 2

### Jamie

A screenshot of a Trello board with a dark blue background. The board is organized into three columns: 'To do', 'Doing', and 'Done'. Each column has a header with a title and three dots, and a footer with a plus icon, the text 'Add a card', and a card icon. The 'To do' and 'Doing' columns are currently empty. The 'Done' column contains four cards with the following text: 'Create main menu for game.', 'Create rules pop up for main menu screen.', 'Add feature where you can start game from main menu.', and 'Add the feature that if a ray comes in contact with an atom at the edge of the board it is reflected.'

To do	Doing	Done
+ Add a card	+ Add a card	Create main menu for game.
		Create rules pop up for main menu screen.
		Add feature where you can start game from main menu.
		Add the feature that if a ray comes in contact with an atom at the edge of the board it is reflected.
		+ Add a card

### Artjom

A screenshot of a Trello board with a pink background. The board is organized into three columns: 'To do', 'Doing', and 'Done'. Each column has a header with a title and three dots, and a footer with a plus icon, the text 'Add a card', and a card icon. The 'To do' and 'Doing' columns are currently empty. The 'Done' column contains five cards with the following text: 'Created moveRay method to calculate ray movement', 'Feature to input rays by mouse click', 'Unit tests - diagrams from rules doc', 'ClosestSide helper method to map mouseClicked to closest border hex side', and 'Edited board to display hexagon border for ray input'.

To do	Doing	Done
+ Add a card	+ Add a card	Created moveRay method to calculate ray movement
		Feature to input rays by mouse click
		Unit tests - diagrams from rules doc
		ClosestSide helper method to map mouseClicked to closest border hex side
		Edited board to display hexagon border for ray input
		+ Add a card