

Fish Boid UI Prototype

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Document Status - Complete

FISH BOID SIMULATION

TYPE:

Red fish:



Green fish:



Purple fish:



Yellow fish:



Shark:

**Clear board****Design 1:**

This is my first attempt, I've gone for a very simplistic easy to navigate style. A few buttons in a side panel to separate it and a blue screen easily recognized as the sea.

FISH BOID SIMULATION

TYPE:

Dlipo fish:



Wuzzy fish:



Zooler fish:



Blitz fish:



Shark:

**Clear board****Design 2:**

After some advice from a second viewer, she liked the simple layout but suggested that the fish should be brighter colours on a darker background to draw attention to the fish some more.

FISH BOID SIMULATION

TYPE:

Red fish:



Green fish:



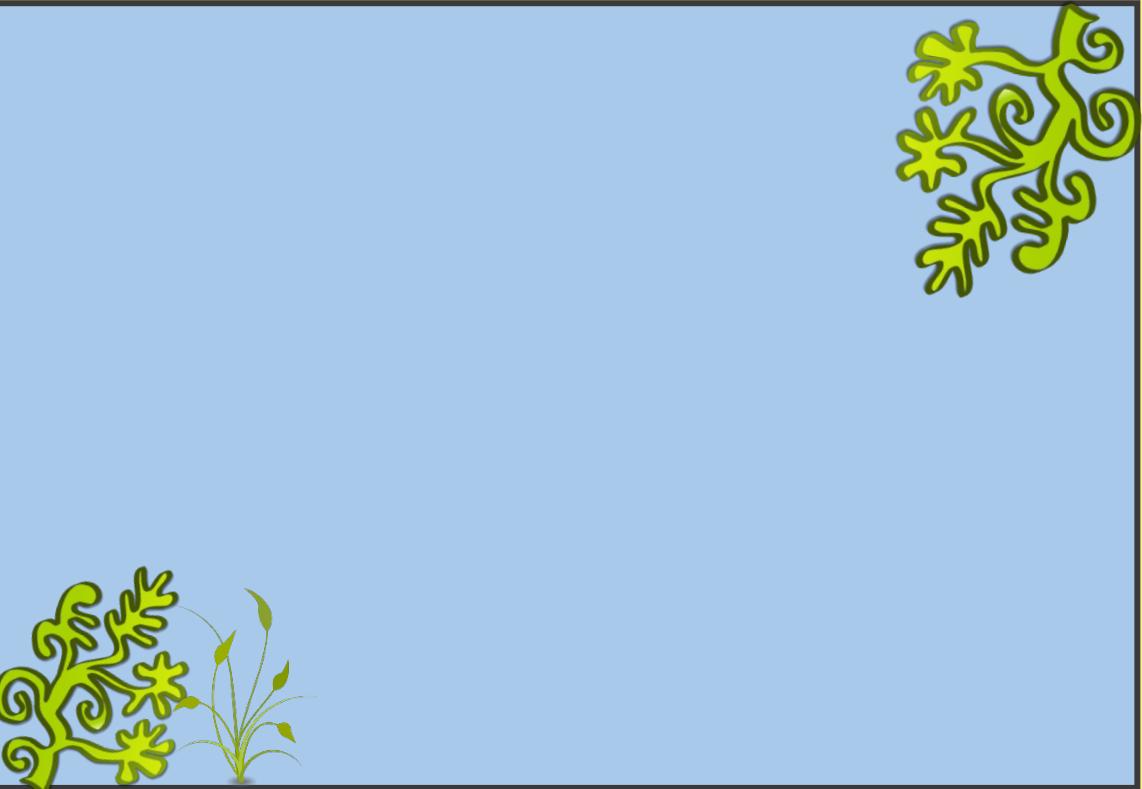
Purple fish:



Yellow fish:



Shark:

**Clear board****SPAWN:****Design 3:**

A third opinion from one of my more artistic friends suggested some simple background art like seaweed would give it more character and more of a feel for the theme of the design. Also, it would clear up any confusion that it is a sea, and this is where the fish are to be spawned.

FISH BOID SIMULATION

TYPE: SPAWN:

Red fish:



Green fish:



Purple fish:



Yellow fish:



Shark:



Clear board



Design 4:

One of my other computer scientist friends suggested more aquatic colours too so again it fits the theme and there is no confusion what it is about, but he also liked the simplistic layout.

FISH BOID SIMULATION

TYPE: SPAWN:

Red fish:



Green fish:



Purple fish:



Yellow fish:



Shark:



Clear board



Design 5:

After consulting another of my friends, she suggested I incorporate the background art into the aquatic colour scheme since it would again give it more of a feel as to what the purpose is.

FISH BOID SIMULATION

TYPE: **SPAWN:**Cardinal fish: Swordtail fish: Guppy fish: Goldfish: Shark: **Clear board****Design 6:**

Finally, my other sister was kind enough to lend me one of her art pieces to set as the background which looks very nice and gives it a more personal touch on my behalf. She also suggested a darker background theme like my other sister.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish:



Swordtail fish:



Guppy fish:



Goldfish:



Shark:



Clear board



Final design:

My final design is compromised of multiple good ideas. My layout from the beginning, fish names, a more suited colour scheme and my sister's picture in the background for a personal touch.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US1)
Select fish type to spawn on the board.

Task: The user will be capable of selecting one of the 4 fish buttons and every other button in the side panel will be unselected.

Action: Click any of the 4 fish buttons.

Result: Fish button selected highlights green while all other buttons are unhighlighted.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US2)
Select shark to spawn on the board.

Task: The user will be capable of selecting one of the shark button and every other button in the side panel will be unselected.

Action: Click the black shark button.

Result: Shark button selected highlights green while all other buttons are unhighlighted.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US3)
Spawn a fish/many fish of different/the same types onto the board.

Task: Select the correct fish button wanted and spawn the fish where you want on the board.

Action: Click the position to spawn on the board.

Result: Fish entity of right type spawned at clicked position.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US3)
Spawn a fish/many fish of different/the same types onto the board.

Task: Select the correct fish button wanted and spawn the fish where you want on the board.

Action: Click the position to spawn on the board.

Result: Fish entity of right type spawned at clicked position.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

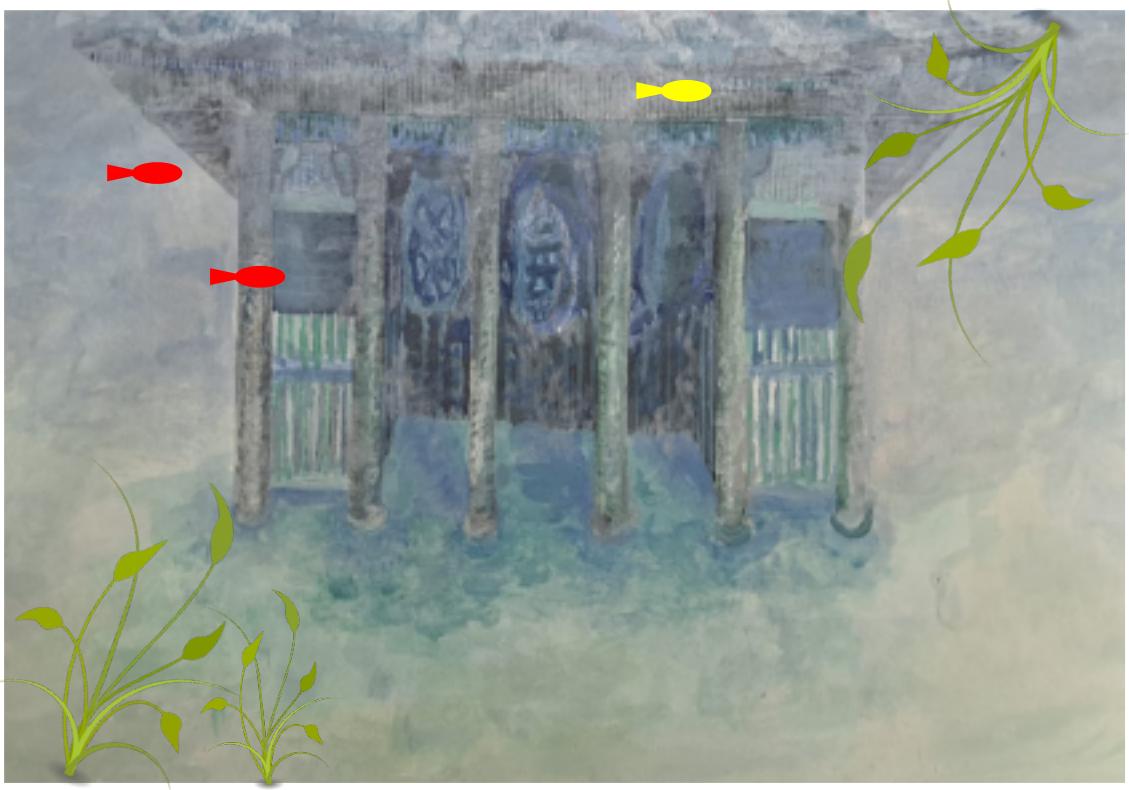
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US3)
Spawn a fish/many fish of different/the same types onto the board.

Task: Select the correct fish button wanted and spawn the fish where you want on the board.

Action: Click the position to spawn on the board.

Result: Fish entity of right type spawned at clicked position.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US4)
Fish move randomly around the board avoiding collisions with the border and other entities.

Task: Move around the board space in swerves avoiding all collisions

Action: Passive

Result: Consistently moving fish entities

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US4)
Fish move randomly around the board avoiding collisions with the border and other entities.

Task: Move around the board space in swerves avoiding all collisions

Action: Passive

Result: Consistently moving fish entities

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US4)
Fish move randomly around the board avoiding collisions with the border and other entities.

Task: Move around the board space in swerves avoiding all collisions

Action: Passive

Result: Consistently moving fish entities

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

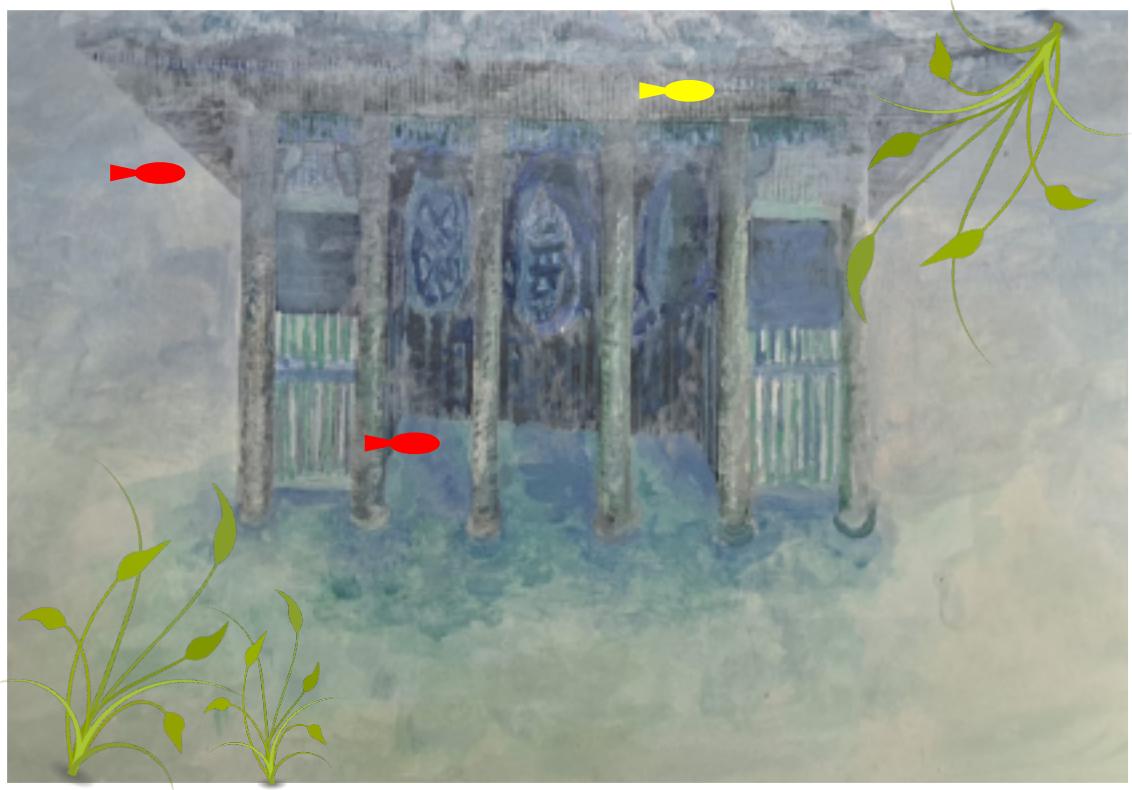
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US5)
Fish of the same type move towards each other to boid together in a group.

Task: Fish of same colour boid as 1 group moving like normal together around other entities.

Action: Passive

Result: Fish boiding algorithms

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US5)
Fish of the same type move towards each other to boid together in a group.

Task: Fish of same colour boid as 1 group moving like normal together around other entities.

Action: Passive

Result: Fish boiding algorithms

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US5)
Fish of the same type move towards each other to boid together in a group.

Task: Fish of same colour boid as 1 group moving like normal together around other entities.

Action: Passive

Result: Fish boiding algorithms

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US5)
Fish of the same type move towards each other to boid together in a group.

Task: Fish of same colour boid as 1 group moving like normal together around other entities.

Action: Passive

Result: Fish boiding algorithms

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US6)
Different fish boids avoid clashing with one another without swimming away from each other.

Task: Fish boids move as groups avoiding both other entities and other groups of entities of different type.

Action: Passive

Result: Completed fish boid movement.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US6)
Different fish boids avoid clashing with one another without swimming away from each other.

Task: Fish boids move as groups avoiding both other entities and other groups of entities of different type.

Action: Passive

Result: Completed fish boid movement.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US6)
Different fish boids avoid clashing with one another without swimming away from each other.

Task: Fish boids move as groups avoiding both other entities and other groups of entities of different type.

Action: Passive

Result: Completed fish boid movement.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

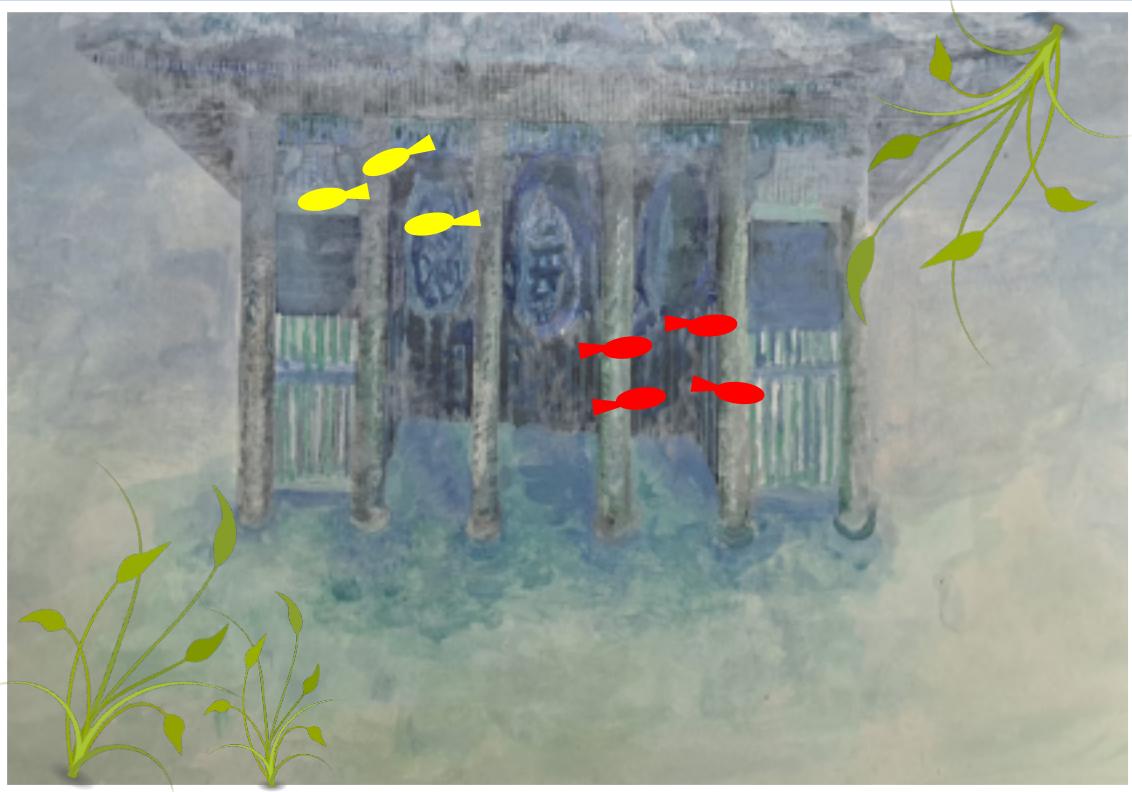
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US6)
Different fish boids avoid clashing with one another without swimming away from each other.

Task: Fish boids move as groups avoiding both other entities and other groups of entities of different type.

Action: Passive

Result: Completed fish boid movement.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US7)
Spawn a shark onto the board.

Task: Select the shark button and spawn the shark where you want on the board.

Action: Click the position to spawn on the board.

Result: Shark entity spawned at clicked position.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

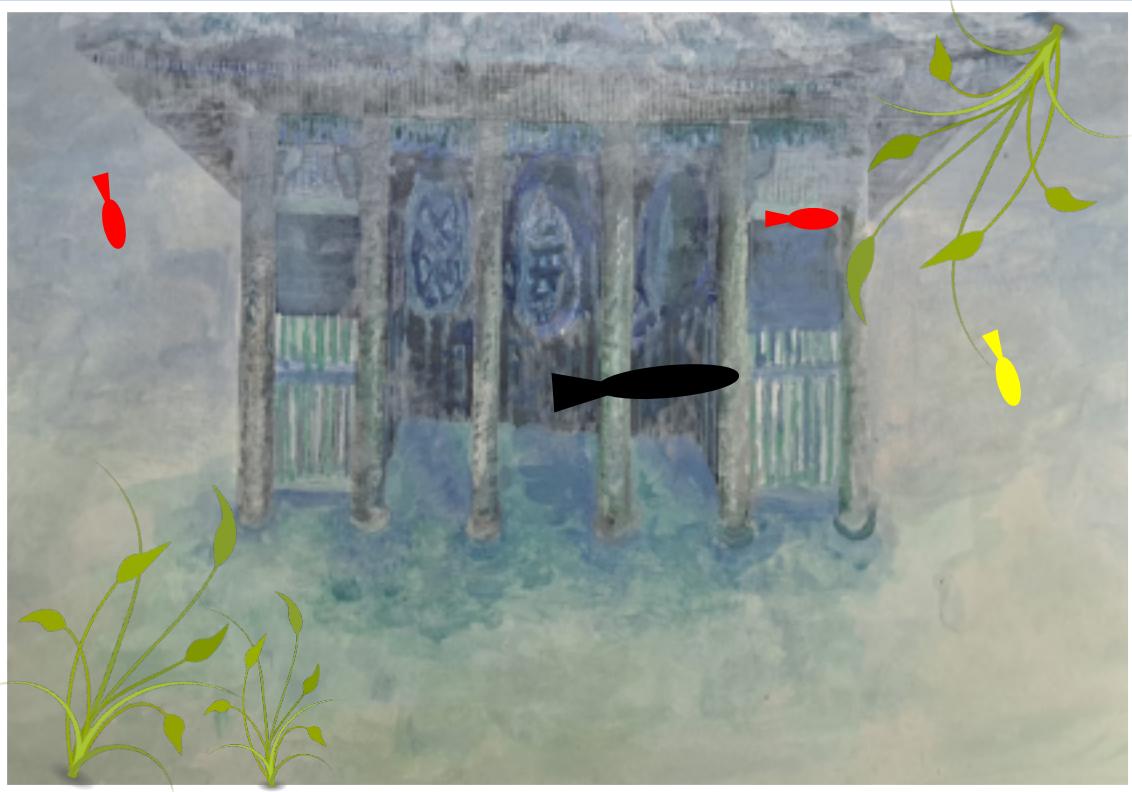
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US8)
Shark moves around the board towards the fish avoiding collisions with the border.

Task: Shark moves towards a fish while not colliding with the walls.

Action: Passive

Result: Fish are followed by the shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

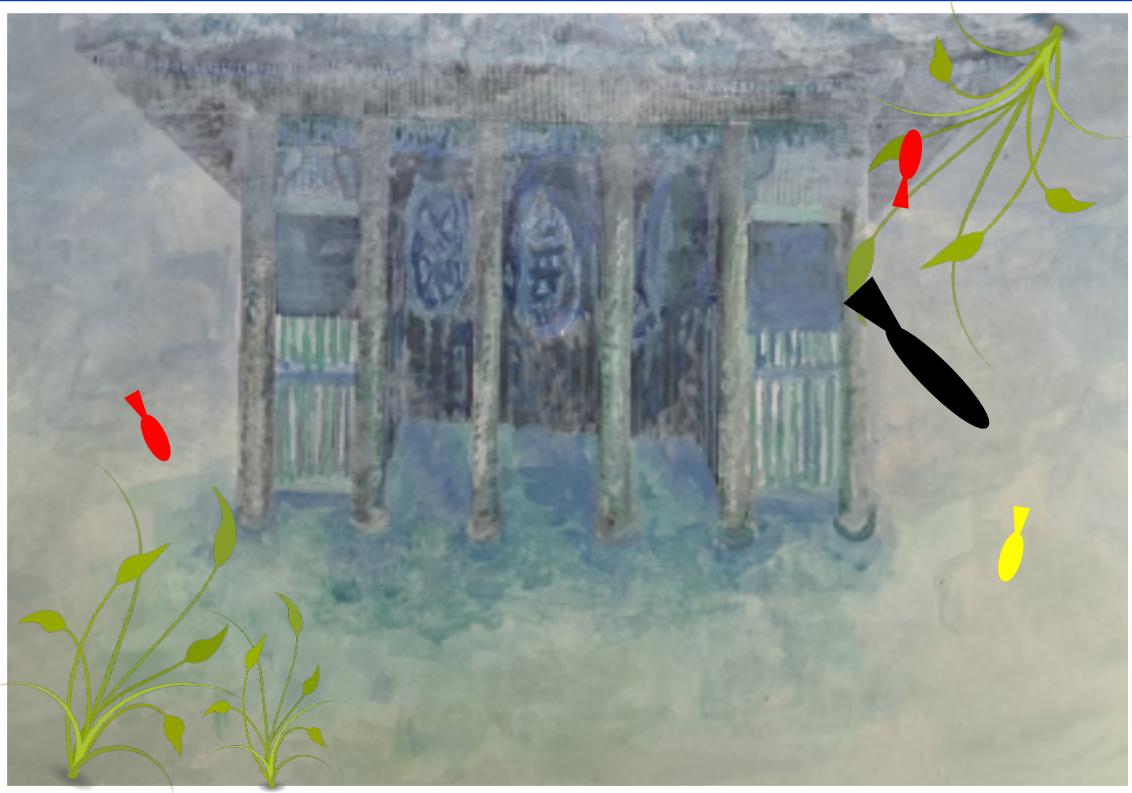
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US8)
Shark moves around the board towards the fish avoiding collisions with the border.

Task: Shark moves towards a fish while not colliding with the walls.

Action: Passive

Result: Fish are followed by the shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US8)
Shark moves around the board towards the fish avoiding collisions with the border.

Task: Shark moves towards a fish while not colliding with the walls.

Action: Passive

Result: Fish are followed by the shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

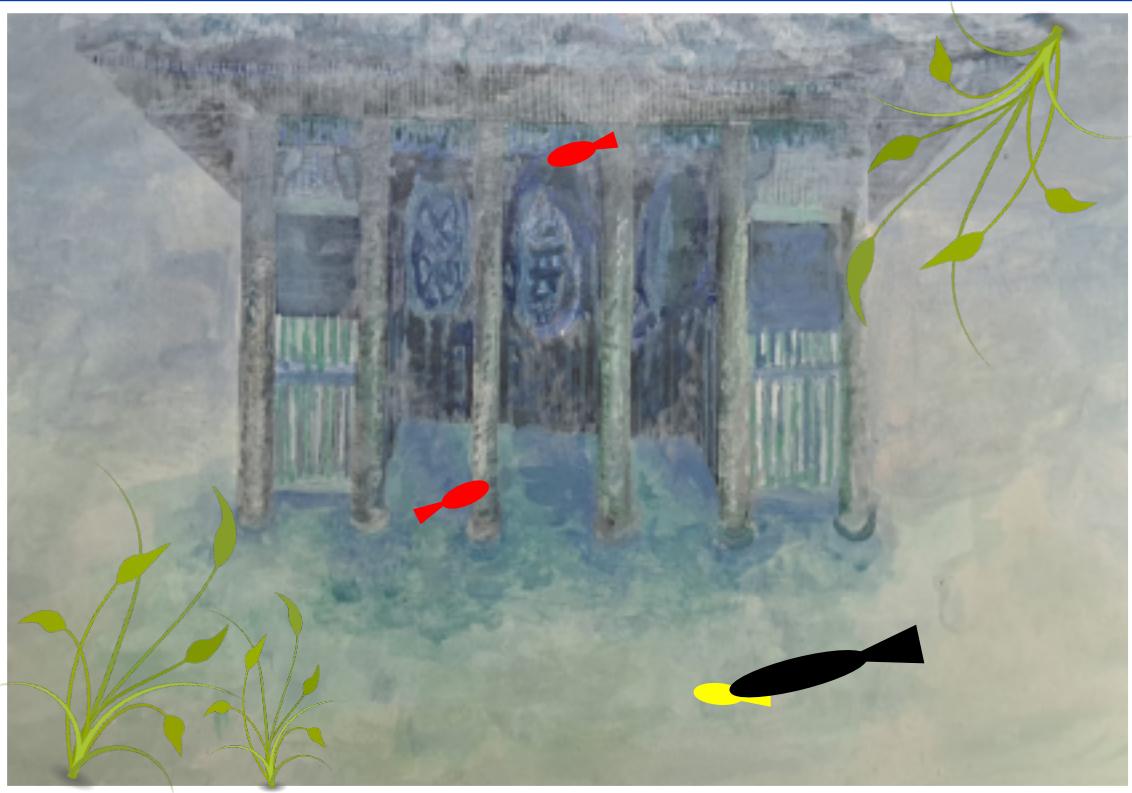
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US9)
On contact with fish
shark eats the fish.

Task: Shark eats the fish
on contact deleting the entity.

Action: Passive

Result: Fish are eaten by
the shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

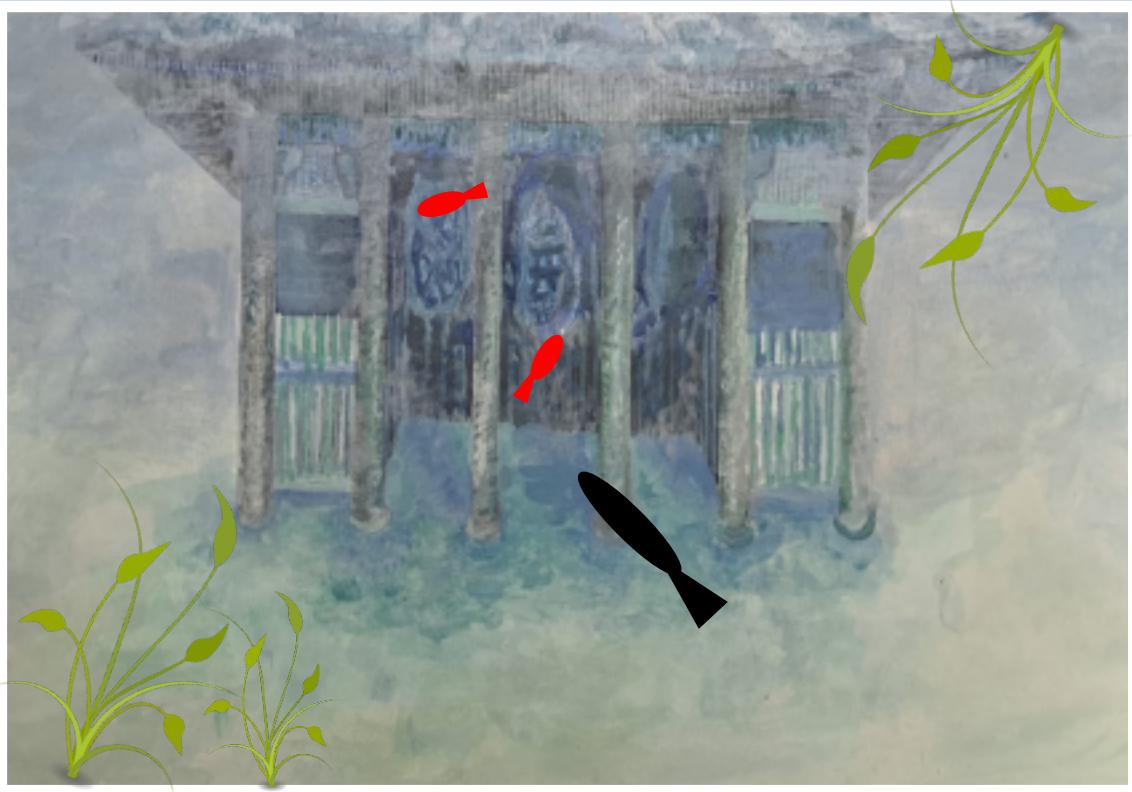
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US9)
On contact with fish
shark eats the fish.

Task: Shark eats the fish
on contact deleting the entity.

Action: Passive

Result: Fish are eaten by
the shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US10)
Fish scatter pushing and breaking the boid to escape when near shark before returning to usual.

Task: Fish boids scatter around the sharks and boid together when safe.

Action: Passive

Result: Fish boid movements handling obstacles like a shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

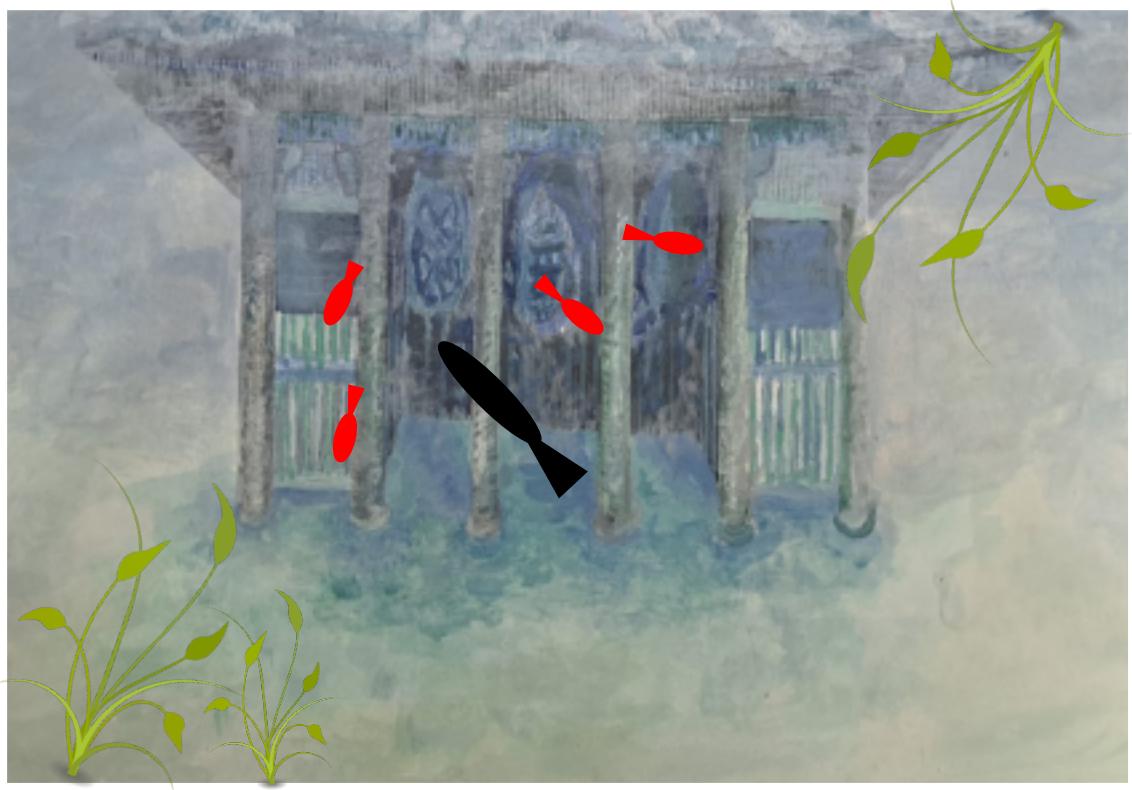
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US10)
Fish scatter pushing and breaking the boid to escape when near shark before returning to usual.

Task: Fish boids scatter around the sharks and boid together when safe.

Action: Passive

Result: Fish boid movements handling obstacles like a shark.

FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

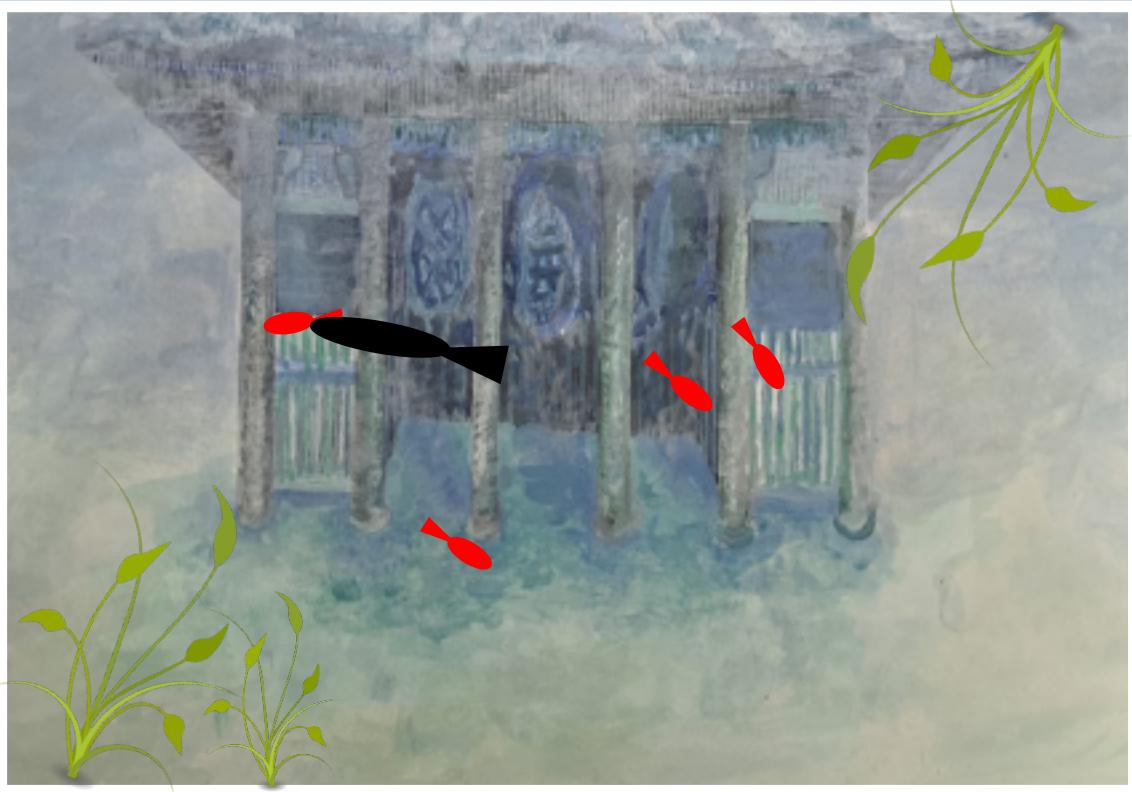
Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US10)
Fish scatter pushing and breaking the boid to escape when near shark before returning to usual.

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Action: Passive

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FISH BOID SIMULATION

TYPE: SPAWN:

Cardinal fish: 

Swordtail fish: 

Guppy fish: 

Goldfish: 

Shark: 

Clear board



User Story Title: (US10)
Fish scatter pushing and breaking the boid to escape when near shark before returning to usual.

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Action: Passive

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Document history

Version	Date	Changes made to document	Changed by
0.1	10/07/25	Setting up the basic document structure.	Jacob Broomfield
0.2	27/07/25	Designing the user interface.	Jacob Broomfield
0.3	02/08/25	Showcasing the first few user requirements.	Jacob Broomfield
1.0	04/08/25	Finishing off the last user requirements and the document.	Jacob Broomfield