**Use Case Documentation WD Team 4**

**CS308**

Use case: Start

Actor: Player

Preconditions: User in build mode, and changes to run mode to start gameplay

Triggers: User clicks the start button

Basic course of events:

1. User clicks the “Start” button

1.1 button mouse event is triggered

1.2 code behind button event handler is fired and the system reacts to user click event

2. Board changes from build mode to play mode

3. Control panel is switched in JFrame displaying the gameplay board

4. Gizmos and ball are displayed in static position, ready for gameplay

Use case: Stop

Actor: Player

Preconditions: Game play must have already be started in order to be stopped

Triggers: User clicks Stop button

Basic course of events:

1. Game is in run mode and has already started gameplay

2. User wishes to end game, and clicks the “Stop” Button

3. Mouse event is triggered, initiating the gameplay to be stopped

4. Game is stopped during execution

Post conditions: The game stops, and stops the ball moving, as well as flippers rotating

Use case: Load Model from pre-existing source

Actor: Player

Preconditions: N/A User expects to load previously saved game

Triggers: User Clicks Load Model button

Basic course of events:

1. User executes Gizmoball system game

2. GUI is displayed to the user

3. User clicks “Load Model” button

4. Button triggers event listener to react to load button being clicked

5. Pre-existing saved game is loaded from file

6. GUI is displayed to the user

Alternative paths: If unexpected data from file throws an exception

Postconditions: Game is displayed in previously saved format as expected

Use case: Save Model

Actor: Player

Preconditions: There should be some progress in build mode in order to save

Triggers: User Clicks Save Model button

Basic course of events:

1. User initiates game, i.e. game is started

2. User is in build mode and creates the gizmos and gameplay as they would like it to be presented in the GUI

3. User clicks “Save Model” during system execution

5. Mouse event trigger is handled

6. Build mode state is saved to external file

7. File is saved for use in future for loading gameplay build

Alternative paths:

1. An exception is raised preventing the user from saving the game.

2. The system crashes whilst the user is saving the data preventing the game from being saved.

Post conditions: Data is saved to a file for use at a later time if the user would like to reload in the future. File is saved without error

Use case: Build Gameplay

Actor: Player

Preconditions: N/A

Triggers: User starts game by clicking on the “Build mode” button to run the mode builder.

Basic course of events:

1. User starts the system game

2. User is in gizmo build mode

3. User can click on buttons displayed on GUI to create Gizmos, flippers, add ball etc to the game

4. When any of these are clicked, the system responds to the mouse event corresponding to the correct button clicked

5. Gizmos are placed in coordinates of game board which the user clicks to create

6. Gizmos such as the absorber are created using drag and drop to define the size

7. Gizmos can be connected together in build mode to form shapes in the board

8. Other settings such as friction and gravity can be defined at this stage

9.1 When the user is finished creating the build of the game, the user can click “Run Mode” firing the mouse event

9.2 Run mode is initialised and the game build created is now displayed for the user to play the game

Alternative paths: 1. The user quits whilst in build mode.

2. User deletes the gizmos already created and aborts build mode unexpectedly.

Use case: Quit

Actor: Player

Preconditions: Game must already be started or in build mode for the user to be able to quit the game using the GUI

Triggers: User clicks Quit button during build mode or in gameplay, triggering an event to stop the game and close the GUI

Basic course of events:

1. User clicks the “Quit game” button

2. System responds to the event and handles this by exiting the system and closing the GUI

Post conditions: Execution finishes, gameplay stops and the GUI closes

\*Still need more use cases such as Add Gizmo, Add Absorber, Key Connect to event handling, Add Flippers etc.\*