

Use Cases

Build Mode

Add Gizmo

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Add Gizmo” button
- Basic course of events
 - User presses the “Add Gizmo” button
 - User clicks where they want the gizmo to be
 - System checks if the gizmo to be added would overlap with any other existing gizmo
 - Adds gizmo to board if it wouldn’t overlap and does nothing if it would overlap
- Post-conditions
 - Gizmo is added to the game board

Move Gizmo

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Move Gizmo” button
- Basic course of events
 - User presses the “Move Gizmo” button
 - User clicks the gizmo they want to move
 - User clicks where they want to move the gizmo
 - System checks if the gizmo to be moved would overlap with any other existing gizmo
 - Moves gizmo if it wouldn’t overlap and does nothing if it would overlap
- Post-conditions
 - Gizmo is moved to another part of the game board

Remove Gizmo

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Remove Gizmo” button
- Basic course of events
 - User presses the “Remove Gizmo” button
 - User clicks the gizmo they want to remove
 - System deletes gizmo from board
- Post-conditions
 - Gizmo is removed from the game board

Rotate Gizmo

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Rotate Gizmo” button
- Basic course of events
 - User presses the “Rotate Gizmo” button
 - User clicks on gizmo to rotate
 - System rotates gizmo 90 degrees clockwise
- Post-conditions
 - Gizmo is rotated 90 degrees clockwise

Add Trigger

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Add Trigger” button
- Basic course of events
 - User presses the “Add Trigger” button
 - User clicks on a gizmo to link its trigger
 - User clicks on another gizmo to link its action to the previously clicked gizmos trigger
 - System links first gizmos trigger to second gizmos action
- Post-conditions
 - First gizmos trigger is linked to second gizmos action

Add Key Trigger

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Add Key Trigger” button
- Basic course of events
 - User presses the “Add Key Trigger” button
 - User presses a key to link its trigger
 - User clicks on a gizmo to link its action to the keys trigger
 - System links the keys trigger to the gizmos action
- Post-conditions
 - Key-press’s trigger is connected to gizmos action

Add Ball

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Add Ball” button
- Basic course of events
 - User presses the “Add Ball” button
 - User enters the balls velocity
 - User clicks where to place the ball
 - System checks whether the ball would overlap a previously placed gizmo or the boundary of the playing area
 - If it does overlap, then do nothing otherwise system places ball on the board
- Alternative event
 - System finds that the ball has no velocity and is inside an absorber
 - System places ball on the board
- Post-conditions
 - Ball is placed on the board

Save Layout

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses “Save Layout” button
- Basic course of events
 - User presses “Save Layout” button
 - System saves the layout to a file in the standard format
- Post-conditions
 - Layout is saved to a file

Load Layout

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses “Load Layout” button
- Basic course of events
 - User presses “Load Layout” button
 - User browses for file to load
 - User clicks open file
 - System loads file
- Post-conditions
 - Layout is loaded from file

Switch to Run Mode

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses the “Switch to Run Mode” button
- Basic course of events
 - User presses the “Switch to Run Mode” button
 - System switches to run mode
- Post-conditions
 - System is switched to run mode

Quit

- Pre-conditions
 - User must be in build mode
- Triggers
 - User presses “Quit” button
- Basic course of events
 - User presses “Quit” button
 - System quits application
- Post-conditions
 - The application has closed

Run Mode

Press Key Trigger

- Pre-conditions
 - User must be in run mode
- Triggers
 - User presses a key
- Basic course of events
 - User presses a key
 - If the key’s trigger is linked to any actions perform the actions otherwise do nothing
- Post-conditions
 - Actions linked to the keys trigger are performed

Switch to Build Mode

- Pre-conditions
 - User must be in run mode
- Triggers
 - User presses “Switch to Build Mode” button
- Basic course of events
 - User presses “Switch to Build Mode” button
 - System waits for any gizmos to finish their current transitional states
 - System switches to build mode
- Post-conditions
 - System is switched to build mode

Quit

- Pre-conditions
 - User must be in run mode
- Triggers
 - User presses “Quit” button
- Basic course of events
 - User presses “Quit” button
 - System quits application
- Post-conditions
 - The application has closed