**Name: Switch to build mode**

**Preconditions:**

Game is play mode

**Triggers:**

User presses build mode button

**Basic course of events:**

1. Game state pauses/stops
2. Grid layout appears
3. Menu hides play mode buttons
4. Menu now has more build options available

**Alternative paths:**

**Post conditions:**

Build mode is now visible

**Name: Add new gizmo**

**Preconditions:**

Game is in build mode

**Triggers:**

User presses build mode button

**Basic course of events:**

1. Allows user to place selected gizmo on the grid

**Alternative paths:**

1. User places gizmo over existing gizmo
2. User action is rejected
3. Error message displayed

**Post conditions:**

Gizmo is now placed

**Name: Moving an existing gizmo**

**Preconditions:**

Game is in build mode

**Triggers:**

User has the move option selected and selects an existing gizmo

**Basic course of events:**

1. Allows user to move selected gizmo on the grid

**Alternative paths:**

1. User places gizmo over existing gizmo
2. User action is rejected
3. Error message displayed

**Post conditions:**

Gizmo is moved to new location

**Name: Rotate a gizmo**

**Preconditions:**

Game is in build mode

**Triggers:**

User has the rotate option selected and selects existing gizmo to rotate

**Basic course of events:**

1. Allows user to rotate the selected gizmo 90 degrees

**Alternative paths:**

1. User selects gizmo with rotational symmetry
2. No rotation occurs
3. Error message displayed

**Post conditions:**

Gizmo is rotated 90 degrees

**Name: Connect action to gizmo (gizmo trigger)**

**Preconditions:**

Game is in build mode

**Triggers:**

User has the connect option selected and selects existing gizmo to perform an action

**Basic course of events:**

1. Allows user to select trigger gizmo

2. Allows user to add an action to gizmo

**Alternative paths:**

**Post conditions:**

If connected gizmo is triggered the selected gizmo will perform an action

**Name: Connect action to gizmo (key press)**

**Preconditions:**

Game is in build mode

**Triggers:**

User has the connect option selected and selects existing gizmo to perform an action

**Basic course of events:**

1. Allows user to enter key to be bound to this action

2. Allows user to add an action to selected gizmo

**Alternative paths:**

1. Key used is control character of some kind

2. User action is rejected

3. Error message displayed

**Post conditions:**

If key is pressed the selected gizmo will perform an action

**Name: Delete Gizmo**

**Preconditions:**

Game is in build mode

**Triggers:**

User has selected the delete option and selects a gizmo

**Basic course of events:**

1. Deletes any connections/actions the gizmo may have

2. Gizmo is removed

**Alternative paths:**

**Post conditions:**

Gizmo is removed from the grid

**Name: Place ball**

**Preconditions:**

Game is in build mode

**Triggers:**

User has selected the place ball option

**Basic course of events:**

1. User Selects location to place ball

2. User specifies initial velocity

**Alternative paths:**

1. User selects location which is overlapping with a gizmo (excluding absorbers)

2. Users action is rejected

3. Error message displayed

**Post conditions:**

Ball is placed inside the play area

**Name: Save file**

**Preconditions:**

Game is in build mode

**Triggers:**

User has selected the save option

**Basic course of events:**

1. User is prompted to name and select location to save file

2. Game state is saved as a file in users selected location

**Alternative paths:**

**Post conditions:**

File is created that represents the game

**Name: Load file**

**Preconditions:**

Game is in build mode

**Triggers:**

User has selected the load option

**Basic course of events:**

1. User is prompted to select the location to load the file

2. Game state is loaded as specified in the file

**Alternative paths:**

1. File contains an error

2. Error Message displayed

**Post conditions:**

Game state from the file is loaded

**Name: Switch to play mode**

**Preconditions:**

Game is build mode

**Triggers:**

User presses play button

**Basic course of events:**

1. Grid layout disappears
2. Menu hides build mode options available
3. Menu shows play mode buttons
4. Play state begins

**Alternative paths:**

**Post conditions:**

Play mode is now visible

**Name: Key Press Trigger**

**Preconditions:**

Game is in play mode

**Triggers:**

Key press that is assigned to an action

**Basic course of events:**

1. Triggers action assigned to the key press

**Alternative paths:**

**Post conditions:**

Action will be performed

**Name: Ball hits a gizmo**

**Preconditions:**

Game is in play mode

Ball is in motion

**Triggers:**

Ball collision with gizmo

**Basic course of events:**

1. Rebound on different direction based on angle of collision

**Alternative paths:**

1. Ball hits absorber
2. Ball is launched directly upwards

**Post conditions:**

The ball is now traveling in a different direction

**Name: Ticker**

**Preconditions:**

Game is in play mode

**Triggers:**

User presses tick option

**Basic course of events:**

1. Game plays one tick

**Alternative paths:**

1. Collision occurs within tick

2. Game stops at collision

**Post conditions:**

Game has played one tick or until collision and then pauses

**Name: Quit**

**Preconditions:**

**Triggers:**

User presses quit option

**Basic course of events:**

1. Gizmoball closes

**Alternative paths:**

1. Unsaved changes, asks user to save before quitting

2. (If Save selected) Save

3. Gizmoball closes

**Post conditions:**

Gizmoball application is now closed