

Class Diagram Description

Model Package

Gizmo - Abstract Class

An abstract class that contains common information and functionality for gizmos (position, colour, composing lines and circles). Individual gizmo classes extend this class and then include their unique functionality.

GCircle - extends Gizmo

A class to hold data and functionality for circle gizmos

GSquare - extends Gizmo

A class to hold data and functionality for square gizmos

GTriangle - extends Gizmo

A class to hold data and functionality for triangle gizmos. Additionally includes functionality for rotation.

GAbsorber - extends Gizmo

A class to hold data and functionality for absorber gizmos. Additionally includes functionality for it be a custom size of squares.

GFlipper - extends Gizmo

A class to hold data and functionality for flipper gizmos. Additionally includes functionality to determine orientation and, activation and angle flipped.

Ball - The playing ball

A class to maintain the information and functionality for the ball that is in play, this includes speed, position and composing circle.

Model - The environment of the play area in the back end

A class to maintain the information and functionality of the game in play. This includes defining the magnitude of gravity, and friction, The borders composed of lines, the gizmos in play and observers. Also provides the functionalities to add gizmos of the game, move the ball and notify of changes.

View Package

IGUI - Interface - Interface provides methods for the BuildGUI & RunGUI.

BuildGUI - Creates the GUI that will be displayed during the build mode.

RunGUI - Creates the GUI that will be displayed during the play mode.

Board - The canvas/game area that will display the graphics.

Controller Package

RunModeListener - Keeps track of time during the play mode state.

ExitListener - Upon user close, will get user confirmation message + close all open game windows.

AddGizmoListener - Listens for a mouse press and places gizmo if space is available.

AddAbsorberListener - Listens for mouse down and up actions, this will define the area to put an absorber. Will only place if area is clear of other gizmos.

GizmoKeyListener - Listens for user key press then triggers a gizmo's action.