GD Grid

Grid.gd is designed to allow a user to automatically create a statically-sized 2D array and interact with it using (x, y) coordinates rather than using nested arrays

*Grid coordinates begin counting at 1 (first element will be (1,1)) but the underlying 1-D array begins at 0

Class Variables

Grid	Underlying array of elements. This is a 1-dimensional array the Grid class mathematically generates and organizes based on what values are assigned to ROWS and COLUMNS
COLUMNS	The number of columns (max x-value) the Grid contains **DO NOT ALTER**
ROWS	The number of rows (max y-value) the Grid contains **DO NOT ALTER**

Member Functions

void	_init(int x, int y, var default = null)
void	setElement(int x, int y, var set)
var	getElement(int x, int y)
int	coordsToIndex(int x, int y)
Vector2	indexToCoords(int index)
void	printAll()
bool	isValid(int x, int y)

Member Function Description

_init(int x, int y, var default = null)

Initializes Grid object and creates an array of size x * y with every element set to whatever default is set to

setElement(int x, int y, var set)

Sets the value of the element at coordinates (x, y) to the 3rd argument

getElement(int x, int y)

Returns the value stored at coordinates (x, y)

coordsToIndex(int x, int y)

Converts x, y coordinates into corresponding index value of underlying array

indexToCoords(int index)

Converts array index value to corresponding x, y coordinates

printAll()

Prints the value and coordinates of each element to the console

isValid(int x, int y)

Returns true if coordinates (x, y) exist on the grid, otherwise returns false