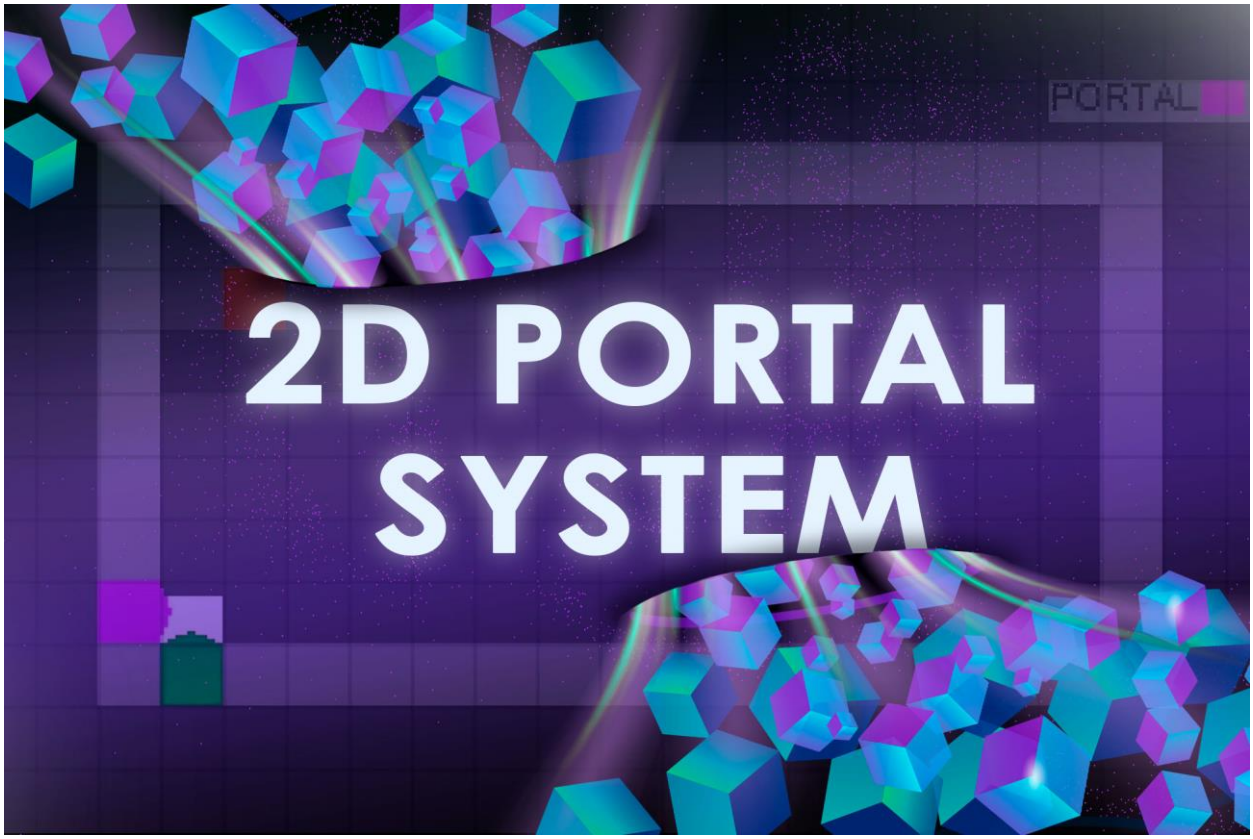
2D Portal System



Introduction

A complete solution for a puzzle game that includes a teleportation system in 2D space. The teleportation algorithm is flexible and easily customizable, due to which you can easily achieve the desired result for any need.

Asset features:

1. fast and thoughtful algorithm for moving a player in a level space along teleport points;
2. conservation of momentum and direction of movement of the player after moving through the portal;
3. ready-made puzzle game where you have to realize your levels;
4. convenient system for creating your own levels using ready-made prefabs of walls, obstacles and interactive objects;
5. the ability to flexibly customize character control and behavior.

Asset included:

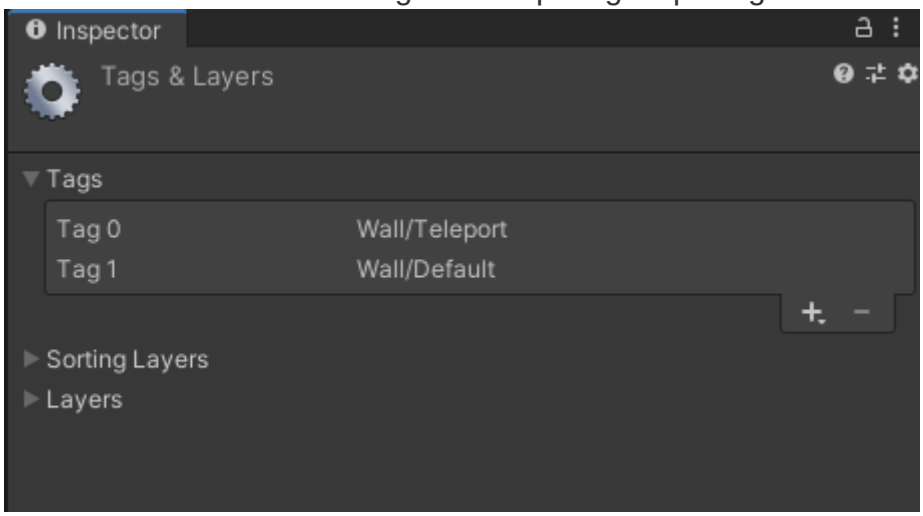
1. one demo scene;
2. prefabs for building your own level;
3. chamber with the effect of a 16-bit grid.

Example Scenes

An example of a scene is a ready-made level where you need to get to the green cube (exit the level). Using the mechanics of the portals, it is necessary to arrange the portals so that you are on the upper platform near the exit.

Presettings

Make sure to add two tags when importing the package:

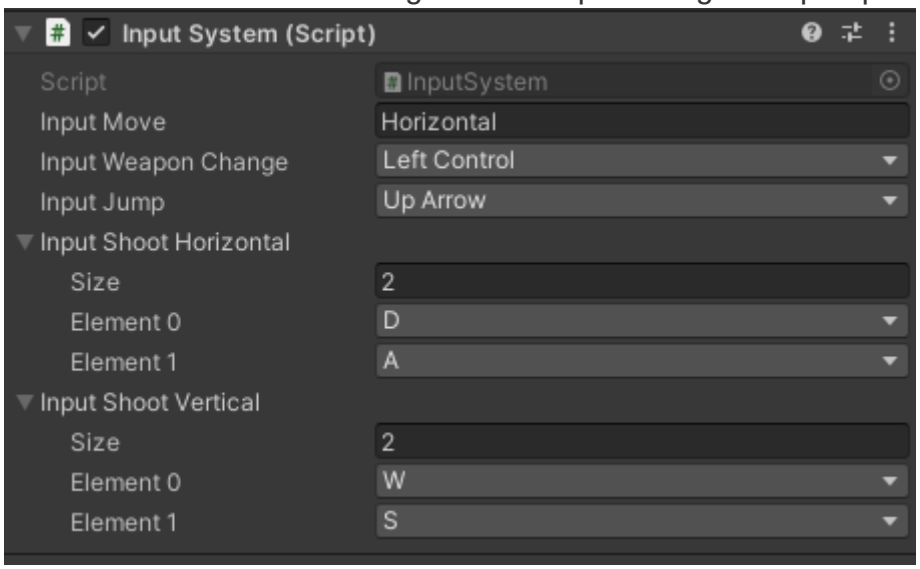


Character control

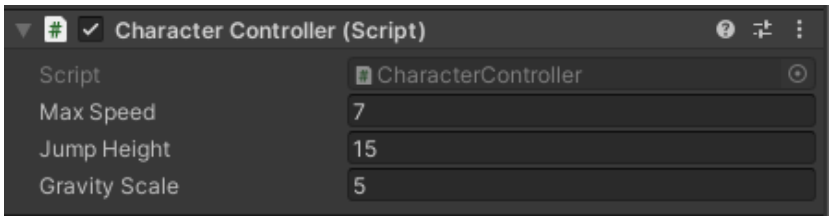
Character control includes a standard set of keys:

1. move left and right - "←", "→";
2. jump - "↑";
3. a shot by a teleport shell in the direction of "W", "A", "S", "D";
4. change the type (color) of the teleport - "Left Ctrl".

More flexible control can be configured in the input manager - script "InputSystem":



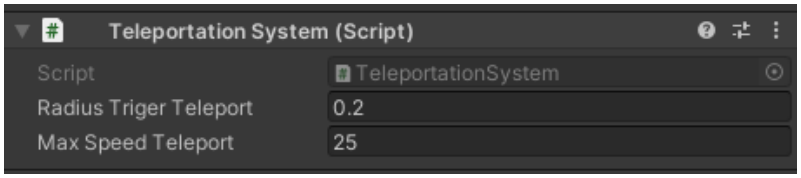
Character options



The player object includes the "Character Controller" script, which has a number of modifiable parameters:

1. **Max Speed** - maximum speed of movement;
2. **Jump Height** - jump height;
3. **Gravity Scale** - the degree of influence of gravity on this object;

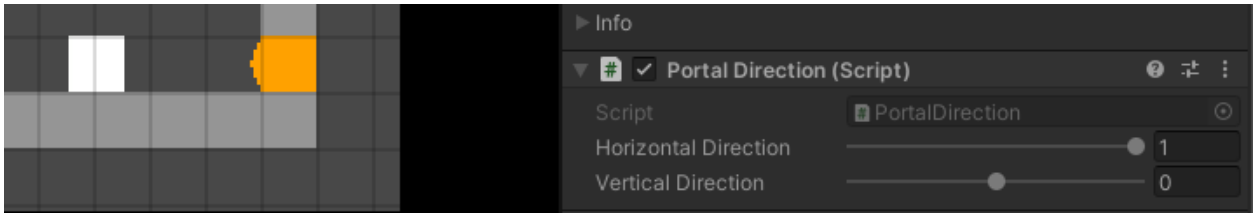
Teleportation options



The script "Teleportation System" contains a number of parameters:

1. **Radius Triger Teleport** - in a given radius from the portal object, the player will interact and move to another portal;
2. **Max Speed Teleport** - when a player moves between portals, the character will not go beyond the limit specified in this field. For example, when a player cyclically moves from the upper to the lower portal, the character will constantly accelerate under the force of gravity, after which a collision with the surface may not occur and the character will be outside the level. This parameter fixes this bug;

Portal System Algorithm



Wall blocks include the "Portal Direction" script, which determines the direction of the portal, which side requires entry. The convex part of the portal defines the side of the entrance to it. The script takes a value from the shell value, which determines the horizontal or vertical direction.

The teleportation algorithm determines the direction of all teleports and, depending on this, physical values are assigned to the character. For example, if two teleporters are located on the lower horizontal platform, then when teleporting, the character's impulse is inverted.

This algorithm is implemented with all the conditions of the character's behavior when teleporting in the "Teleportation System" script.

Support

If you are confused by something, you can write to denis@proger.xyz and we will do our best to contact you immediately. We hope you enjoy our asset and good luck in creating your games!