Structure Placement

# Object: StructurePlacementController

## Description

This class performs the structure placement function of our game, Kairos via ray casting to get the exact position of the mouse.

## Namespaces

|  |  |
| --- | --- |
| Name | Description |
| Systems.Collection | Contains interfaces and classes that define various collections of objects, such as lists, queues, bit arrays, hash tables and dictionaries. |
| Systems.Collection.Generic | Contains interfaces and classes that define generic collections, which allow users to create strongly typed collections that provide better type safety and performance than non-generic strongly typed collections. |
| UnityEngine | Contains all of the Unity Engine’s interfaces and classes used to develop games. |

## Serialized Fields

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Descritption |
| Private | GameObject | \_placeholderBuilding | The structure is shown on the mouse when placing said structure. |
| Private | GameObject | \_placeholder | A copy of the structure from the building to manipulate its position. |
| Private | Grid | \_grid | The grid used to find the position of the structure is placed. |
| Private | GameObject | \_building | The structure that will be placed down on the grid. |

## Fields

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Descritption |
| Private | Vector3 | \_mousePosition | Position of the mouse being used to place the structure. |
| Private | float | \_previousX | The previous X coordinate of the ray cast if a structure was placed down. |
| Private | float | \_previousY | The previous Y coordinate of the ray cast if a structure was placed down. |
| Private | float | \_previousZ | The previous Z coordinate of the ray cast if a structure was placed down. |

## Functions

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Description |
| Public | Void | Update | This function allows the player to place a Structure onto a Grid below the Terrain object |
| Public | Void | HandleBuildingPlacement | This function sees if the player can place a building in the current position they’re mousing over or not. |