

cosmos

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Connection	7
Editor	
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MonoBehaviour	
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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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Core class for any low-level graph manipulations	8
GraphGenerator	
Monobehaviour. Graph generator and holder	9
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Planet	
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Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

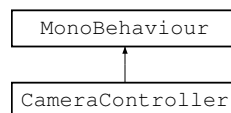
CameraController.cs	
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GraphGenerator.cs	
File with GraphGenerator definition	15
Planet.cs	
File with Planet definition	16

Chapter 4

Class Documentation

4.1 CameraController Class Reference

Inheritance diagram for CameraController:



Public Attributes

- [GraphGenerator](#) **graphGenerator**
- float **mouseRotationSpeed** = 3.0f

4.1.1 Detailed Description

Monobehaviour. Controls camera movement and zooming.

The documentation for this class was generated from the following file:

- [CameraController.cs](#)

4.2 Connection Class Reference

Public Attributes

- [Planet](#) **planetFrom**
- float **Length** => (planetFrom.transform.position - planetTo.transform.position).magnitude

The documentation for this class was generated from the following file:

- [Connection.cs](#)

4.3 Graph Class Reference

Core class for any low-level graph manipulations.

Public Member Functions

- Vector3 [GetSize](#) ()
- float [GetRadius](#) ()
- bool [AreConnected](#) ([PlanetSystem](#) node1, [PlanetSystem](#) node2)
- List< [PlanetSystem](#) > [GetNeighbors](#) ([PlanetSystem](#) node)
- void [NormalizeLocation](#) ()

Public Attributes

- List< [PlanetSystem](#) > [nodes](#)
- bool[,] [connections](#)

Properties

- [PlanetSystem](#) [this\[int index\]](#) [get]
- bool [this\[int i, int j\]](#) [get]

4.3.1 Detailed Description

Core class for any low-level graph manipulations.

4.3.2 Member Function Documentation

4.3.2.1 AreConnected()

```
bool Graph.AreConnected (
    PlanetSystem node1,
    PlanetSystem node2 ) [inline]
```

Returns true if given nodes are connected and false otherwise.

4.3.2.2 GetNeighbors()

```
List<PlanetSystem> Graph.GetNeighbors (
    PlanetSystem node ) [inline]
```

Returns list of nodes which are connected to the given one.

4.3.2.3 GetRadius()

```
float Graph.GetRadius ( ) [inline]
```

Returns a half of max distance between two nodes.

4.3.2.4 GetSize()

```
Vector3 Graph.GetSize ( ) [inline]
```

Returns Vector3 width dimentions of cube which this graph can be fitted in.

4.3.2.5 NormalizeLocation()

```
void Graph.NormalizeLocation ( ) [inline]
```

Shifts all nodes so that the center of the entire graph is located at zero.

Used in Generate method only.

4.3.3 Member Data Documentation

4.3.3.1 nodes

```
List<PlanetSystem> Graph.nodes
```

List of nodes that are exist in graph and connections between them. (graph is bidirectional: connections[i,j] = connections[j,i]).

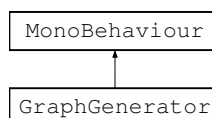
The documentation for this class was generated from the following file:

- [Graph.cs](#)

4.4 GraphGenerator Class Reference

Monobehaviour. [Graph](#) generator and holder.

Inheritance diagram for GraphGenerator:



Public Member Functions

- void [GenerateGraph](#) ()
- [PlanetSystem](#) [GeneratePlanetSystem](#) (int [planetsAmount](#))
- void [ClearGraph](#) ()

Public Attributes

- int [systemsAmount](#) = 10
- float [systemDistance](#) = 3.0f
- int [planetsAmount](#) = 3
- float [planetOrbitStep](#) = 0.4f
- GameObject [planetPrefab](#)
- GameObject **systemPrefab**
- GameObject **connectionPrefab**
- [Graph](#) [graph](#)

4.4.1 Detailed Description

Monobehaviour. [Graph](#) generator and holder.

4.4.2 Member Function Documentation

4.4.2.1 ClearGraph()

```
void GraphGenerator.ClearGraph ( ) [inline]
```

Destroys all spawned objects and resets graph to null.

4.4.2.2 GenerateGraph()

```
void GraphGenerator.GenerateGraph ( ) [inline]
```

Generates new [Graph](#).

Maximum distance will be calculated from minimum as follows: $\text{max} = \text{min} * (\text{sqrt}(2) - 0.1)$

4.4.2.3 GeneratePlanetSystem()

```
PlanetSystem GraphGenerator.GeneratePlanetSystem (
    int planetsAmount ) [inline]
```

Randomly generates new system with given planets amount.

4.4.3 Member Data Documentation

4.4.3.1 graph

`Graph` `GraphGenerator.graph`

Actual low-level graph object.

4.4.3.2 planetOrbitStep

`float` `GraphGenerator.planetOrbitStep = 0.4f`

`Planet` orbits radius step.

4.4.3.3 planetPrefab

`GameObject` `GraphGenerator.planetPrefab`

Prefabs for planets, systems and connections between systems.

4.4.3.4 planetsAmount

`int` `GraphGenerator.planetsAmount = 3`

Amount of planets in one system.

4.4.3.5 systemDistance

`float` `GraphGenerator.systemDistance = 3.0f`

Minimum distance between two systems.

4.4.3.6 systemsAmount

`int` `GraphGenerator.systemsAmount = 10`

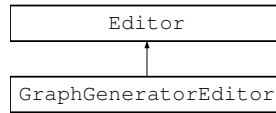
Amount of planet systems to generate.

The documentation for this class was generated from the following file:

- [GraphGenerator.cs](#)

4.5 GraphGeneratorEditor Class Reference

Inheritance diagram for GraphGeneratorEditor:



Public Member Functions

- override void **OnInspectorGUI** ()

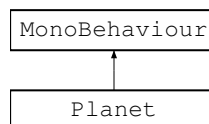
The documentation for this class was generated from the following file:

- GraphGeneratorEditor.cs

4.6 Planet Class Reference

Basic class for [Planet](#) logic.

Inheritance diagram for Planet:



Public Attributes

- int **banksAmount** = 1
- int **factoryAmount** = 1

4.6.1 Detailed Description

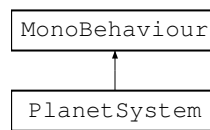
Basic class for [Planet](#) logic.

The documentation for this class was generated from the following file:

- [Planet.cs](#)

4.7 PlanetSystem Class Reference

Inheritance diagram for PlanetSystem:



Public Attributes

- List< [Planet](#) > planets

The documentation for this class was generated from the following file:

- PlanetSystem.cs

Chapter 5

File Documentation

5.1 CameraController.cs File Reference

File with [CameraController](#) definition.

Classes

- class [CameraController](#)

5.1.1 Detailed Description

File with [CameraController](#) definition.

5.2 Graph.cs File Reference

File with [Graph](#) definition.

Classes

- class [Graph](#)
Core class for any low-level graph manipulations.

5.2.1 Detailed Description

File with [Graph](#) definition.

5.3 GraphGenerator.cs File Reference

File with [GraphGenerator](#) definition.

Classes

- class [GraphGenerator](#)
Monobehaviour. [Graph](#) generator and holder.

5.3.1 Detailed Description

File with [GraphGenerator](#) definition.

5.4 Planet.cs File Reference

File with [Planet](#) definition.

Classes

- class [Planet](#)
Basic class for [Planet](#) logic.

5.4.1 Detailed Description

File with [Planet](#) definition.

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