Midnight Blue

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1.1 Namespace List

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

2 Hierarchical Index

2.1 Class Hierarchy

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

3 Class Index

3.1 Class List

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

4 Namespace Documentation

4.1 MidnightBlue Namespace Reference

Namespaces

Classes

- class **EcosystemTool**

  Takes numeric inputs and produces temperature, height, and moisture categories. Also produces biomes based on the three outputs.
- class EnterStarSystem

  Enters a star system scene from the galaxy view
- class Fuel

  Fuel used in the ships normal thruster drive
- class GalaxyBuilder
- class GalaxyHud

  HUD to show in the galaxy view.
- class GalaxyRenderSystem

  Renders all information into the main HUD's list box on the hovered star system. Also displays the name of all the star systems planets.
- class GalaxyScene

  The scene displayed at the galaxy view - handles the control over all systems, loading, and content management for the scene.
- class InitScene

  The scene shown at the title screen.
- class LandCommand

  Lands the ship
- class LaunchCommand

  Launches the ship from a landed state
- class LeaveStarSystem
- class Length

  Defines a measurement of length in meters able to be converted to other measurements.
- class MenuCommand
- class MenuScene
- class MenuView
- class MoveShip

  Performs logic aside from movement required to execute when moving the ship such as consuming fuel.
- class NoiseMap

  Generates a fractal 2D map using Simplex Noise
- class Planet

  A fully-generated planet in a star system with associated texture maps.
- class PlanetComponent

  Represents a planet entity with pre-generated metadata
- class PlanetMetadata

  Planet metadata used as information and arguments for generating the actual biome map of a planet. Required for an entity to be treated as a planet.
- class PlanetScene

  Scene active when the player is exploring a given planet.
- class PlanetTile

  A tile type used in planet tilemaps

- class ShipController

  Controls a ships movement and actions
- class ShipInputSystem

  Handles moving the ship forward and backwards.
- class StarSystem

  Represents an star system entity to be used in the galaxy view
- class StarSystemHud

  Star system hud with minimap.
- class StarSystemScene

  Scene to display a star system with planets and a star.
- class TitleScene

  The scene shown at the title screen.
- class TitleView

  The title screens UI view
- class **UIColors**

  The main color scheme for the UI

Enumerations

- enum ShipState {
  Normal, **Landing**, **Launching**, **LeavingScreen**,
  Warping }

  Represents the current travelling state of the ship
- enum Biome {
  Biome.Tundra, Biome.Taiga, Biome.Woodland, Biome.Shrubland,
  Biome.TemperateGrassland, Biome.Desert, Biome.SubtropicalDesert, Biome.Savana,
  Biome.TropicalSeasonalForest, Biome.TemperateSeasonalForest, Biome.TemperateRainforest, Biome.↩
  TropicalRainforest,
  Biome.Barren, Biome.ShallowOcean, Biome.Ocean, Biome.Ice }

  Represents a biome type in a planets tile map.
- enum HeightLevel {
  HeightLevel.Depths = 0, HeightLevel.SeaLevel, HeightLevel.Lowland, HeightLevel.Mountainous,
  HeightLevel.Alpine, HeightLevel.Snow }

  Represents height categories for biomes.
- enum MoistureLevel {
  Arid = 0, **Dry**, **SemiDry**, **SemiMoist**,
  Moist, **Wet** }

  Represents moisture categories for biomes used in generation.
- enum TemperatureLevel {
  TemperatureLevel.Freezing = 0, TemperatureLevel.Polar, TemperatureLevel.Tundra, TemperatureLevel.↩
  Taiga,
  TemperatureLevel.Temperate, TemperatureLevel.SubTropical, TemperatureLevel.Tropical, Temperature↩
  Level.Hot,
  TemperatureLevel.Harsh, TemperatureLevel.SuperHot, TemperatureLevel.Scorching }

  Represents categories of temperature used in generating biomes and player interactions.
- enum PlanetType { **Water**, **Terrestrial**, **Gas** }

  Planet type used for information.

4.1.1 Enumeration Type Documentation

4.1.1.1 Biome

`enum MidnightBlue.Biome [strong]`

Represents a biome type in a planets tile map.

Enumerator

Tundra	Super cold environment.
Taiga	Most common cold environment.
Woodland	Cold forest biome.
Shrubland	Shrubland - can be cold or hot.
TemperateGrassland	Most common temperate biome.
Desert	Desert biome.
SubtropicalDesert	Desert biome akin to southern californian deserts.
Savana	Savana biome - flatlands with grass.
TropicalSeasonalForest	Biome similar to Australian outback forests.
TemperateSeasonalForest	Biome similar to canadian redwood forests.
TemperateRainforest	Biome like southern Australian rainforests - colder environment rainforest.
TropicalRainforest	Classic rainforest biome.
Barren	Completely cracked, barren environment most present in inhospitable location.
ShallowOcean	Shallow water biome - lighter in color than deep water.
Ocean	Deep ocean biome.
Ice	Ice biome - mostly present in inhospitable cold planets.

4.1.1.2 HeightLevel

`enum MidnightBlue.HeightLevel [strong]`

Represents height categories for biomes.

Enumerator

Depths	Will always be ocean biome unless super cold where it will be ice.
SeaLevel	Will always be shallow ocean biome unless super cold where it will be ice.
Lowland	Will contain all forest and grassland biomes.
Mountainous	Will contain all mountaineous biomes - will be colder than other biomes, too.
Alpine	Will contain all mountaineous biomes - will be much colder than other biomes, too.
Snow	Heighest level of elevation, super cold and only mountaineous biomes.

4.1.1.3 MoistureLevel

`enum MidnightBlue.MoistureLevel [strong]`

Represents moisture categories for biomes used in generation.

4.1.1.4 PlanetType

`enum MidnightBlue.PlanetType [strong]`

Planet type used for information.

4.1.1.5 ShipState

`enum MidnightBlue.ShipState [strong]`

Represents the current travelling state of the ship

4.1.1.6 TemperatureLevel

`enum MidnightBlue.TemperatureLevel [strong]`

Represents categories of temperature used in generating biomes and player interactions.

Enumerator

Freezing	Super cold - only on uninhabitable planets
Polar	Coldest temperature found on inhabitable planets.
Tundra	Coldest temperature to produce varied biomes.
Taiga	Most common cold temperature across inhabitable planets.
Temperate	Most inhabitable temperature that produces the most varied biomes.
SubTropical	Temperature most commonly found for 'hot' biomes.
Tropical	Produces simultaneously very moist, green biomes, and very dry, arid biomes.
Hot	Hottest inhabitable temperature.
Harsh	Hottest temperature to produce varied biomes.
SuperHot	Will only produce barren or desert biomes - no water
Scorching	Will only produce barren biomes - no water. This is like 200+ degrees

4.2 MidnightBlue.Testing Namespace Reference

Classes

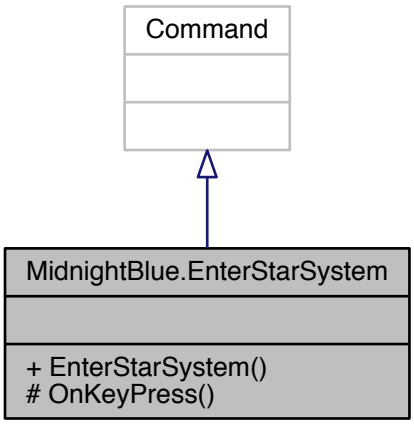
- class GenTest
- class MapTest

5 Class Documentation

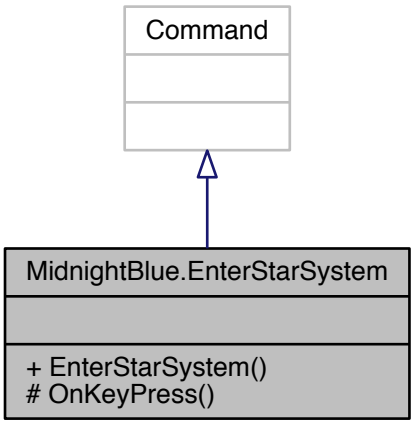
5.1 MidnightBlue.EnterStarSystem Class Reference

Enters a star system scene from the galaxy view

Inheritance diagram for MidnightBlue.EnterStarSystem:



Collaboration diagram for MidnightBlue.EnterStarSystem:



Public Member Functions

- EnterStarSystem (Keys key, CommandType type)

  Initializes a new instance of the T:MidnightBlue.EnterStarSystem class.

Protected Member Functions

- override void OnKeyPress (Entity e)

  Enters the collided with star system on keypress

5.1.1 Detailed Description

Enters a star system scene from the galaxy view

5.1.2 Constructor & Destructor Documentation

5.1.2.1 EnterStarSystem()

```
MidnightBlue.EnterStarSystem.EnterStarSystem (
            Keys key,
            CommandType type )  [inline]
```

Initializes a new instance of the T:MidnightBlue.EnterStarSystem class.

Parameters

key	Key to assign to.
type	Trigger type.

5.1.3 Member Function Documentation

5.1.3.1 OnKeyPress()

```
override void MidnightBlue.EnterStarSystem.OnKeyPress (
            Entity e )  [inline], [protected]
```

Enters the collided with star system on keypress

Parameters

e	E.

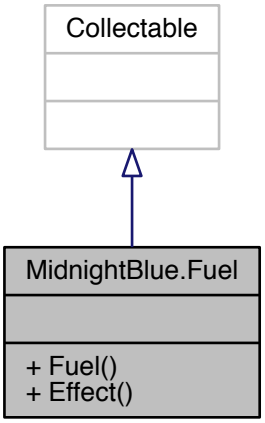
The documentation for this class was generated from the following file:

- Shared/src/Game/Commands/ShipCommands.cs

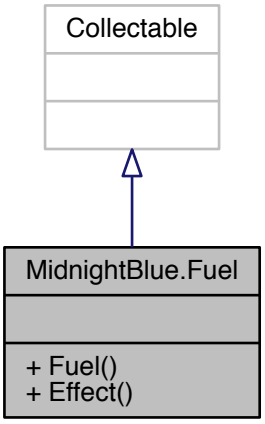
5.2 MidnightBlue.Fuel Class Reference

Fuel used in the ships normal thruster drive

Inheritance diagram for MidnightBlue.Fuel:



Collaboration diagram for MidnightBlue.Fuel:



Public Member Functions

- Fuel (int initialCount)

  Initializes a new instance of the T:MidnightBlue.Fuel class.
- override void Effect (Entity entity)

  Has no effect on the entity

5.2.1 Detailed Description

Fuel used in the ships normal thruster drive

5.2.2 Constructor & Destructor Documentation

5.2.2.1 Fuel()

```
MidnightBlue.Fuel.Fuel (
            int initialCount )  [inline]
```

Initializes a new instance of the T:MidnightBlue.Fuel class.

Parameters

initialCount	Initial amount of fuel.

5.2.3 Member Function Documentation

5.2.3.1 Effect()

```
override void MidnightBlue.Fuel.Effect (
            Entity entity )  [inline]
```

Has no effect on the entity

Parameters

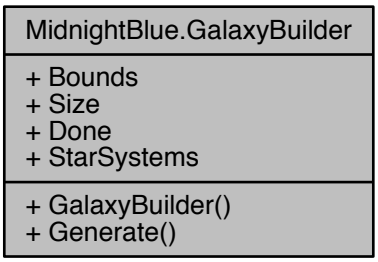
entity	Entity.

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

- Shared/src/Game/Inventory/Fuel.cs

5.3 MidnightBlue.GalaxyBuilder Class Reference

Collaboration diagram for MidnightBlue.GalaxyBuilder:



Public Member Functions

- GalaxyBuilder (ContentManager content, int size, int seed=0)

  Initializes a new instance of the T:MidnightBlue.GalaxyBuilder class. Does not actually generate the galaxy - that's done via Generate()
- List< StarSystem > Generate (int maxDistance)

  Generates the galaxy with a specified max distance between stars. Takes a while so should be called only once per gameplay session.

Properties

- Rectangle Bounds `[get]`

  Gets the bounding rectangle of the galaxy.
- int Size `[get]`

  Gets the number of star systems the galaxy has.
- bool Done `[get]`

  Gets a value indicating whether this T:MidnightBlue.GalaxyBuilder is done generating.
- List< StarSystem > StarSystems `[get]`

  Gets the star system list.

5.3.1 Constructor & Destructor Documentation

5.3.1.1 GalaxyBuilder()

```
MidnightBlue.GalaxyBuilder.GalaxyBuilder (
            ContentManager content,
            int size,
            int seed = 0 )  [inline]
```

Initializes a new instance of the T:MidnightBlue.GalaxyBuilder class. Does not actually generate the galaxy - that's done via Generate()

Parameters

content	Content manager to use for loading resources.
size	Number of star systems to generate.
seed	Seed to use for generation.

5.3.2 Member Function Documentation

5.3.2.1 Generate()

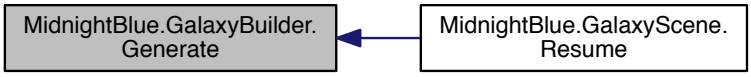
```
List<StarSystem> MidnightBlue.GalaxyBuilder.Generate (
            int maxDistance )  [inline]
```

Generates the galaxy with a specified max distance between stars. Takes a while so should be called only once per gameplay session.

Parameters

maxDistance	Max distance between generated star systems.

Here is the caller graph for this function:



5.3.3 Property Documentation

5.3.3.1 Bounds

```
Rectangle MidnightBlue.GalaxyBuilder.Bounds  [get]
```

Gets the bounding rectangle of the galaxy.

The bounds.

5.3.3.2 Done

```
bool MidnightBlue.GalaxyBuilder.Done  [get]
```

Gets a value indicating whether this T:MidnightBlue.GalaxyBuilder is done generating.

`true` if done; otherwise, `false`.

5.3.3.3 Size

```
int MidnightBlue.GalaxyBuilder.Size  [get]
```

Gets the number of star systems the galaxy has.

The number of star systems.

5.3.3.4 StarSystems

```
List<StarSystem> MidnightBlue.GalaxyBuilder.StarSystems  [get]
```

Gets the star system list.

The star systems.

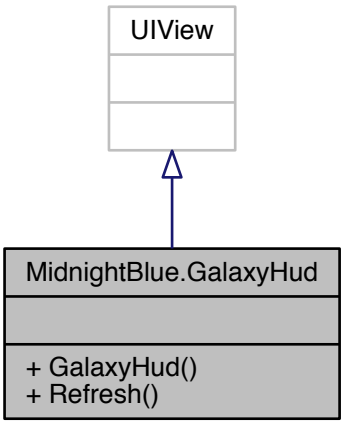
The documentation for this class was generated from the following file:

- Shared/src/Game/Environment/GalaxyBuilder.cs

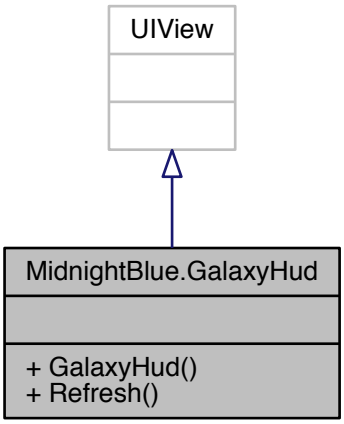
5.4 MidnightBlue.GalaxyHud Class Reference

HUD to show in the galaxy view.

Inheritance diagram for MidnightBlue.GalaxyHud:



Collaboration diagram for MidnightBlue.GalaxyHud:



Public Member Functions

- GalaxyHud (ContentManager content)

  Initializes a new instance of the T:MB2D.GalaxyHud class.
- void Refresh (Inventory inventory)

  Refreshed the HUD with the specified inventory values.

5.4.1 Detailed Description

HUD to show in the galaxy view.

5.4.2 Constructor & Destructor Documentation

5.4.2.1 GalaxyHud()

```
MidnightBlue.GalaxyHud.GalaxyHud (
            ContentManager content )  [inline]
```

Initializes a new instance of the T:MB2D.GalaxyHud class.

Parameters

content	Content to use in loading fonts and textures.

5.4.3 Member Function Documentation

5.4.3.1 Refresh()

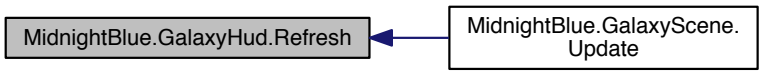
```
void MidnightBlue.GalaxyHud.Refresh (
            Inventory inventory )  [inline]
```

Refreshed the HUD with the specified inventory values.

Parameters

inventory	Inventory to use to refresh the display.

Here is the caller graph for this function:



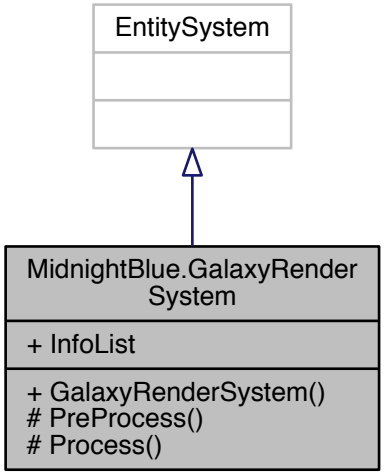
The documentation for this class was generated from the following file:

- Shared/src/Game/UIViews/GalaxyHud.cs

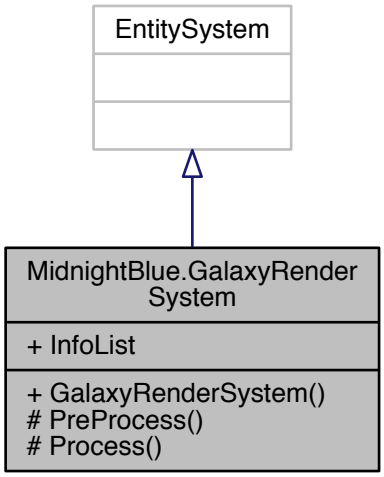
5.5 MidnightBlue.GalaxyRenderSystem Class Reference

Renders all information into the main HUD's list box on the hovered star system. Also displays the name of all the star systems planets.

Inheritance diagram for MidnightBlue.GalaxyRenderSystem:



Collaboration diagram for MidnightBlue.GalaxyRenderSystem:



Public Member Functions

- GalaxyRenderSystem (SpriteBatch spriteBatch, ContentManager content)

  Initializes a new instance of the T:MidnightBlue.GalaxyRenderSystem class.

Protected Member Functions

- override void PreProcess ()

  Clears the starsystems info list before processing all entities.
- override void Process (Entity entity)

  Checks for collisions with a star system in the galaxy view and renders any information associated with that star re:planets.

Properties

- List< string > InfoList `[get]`

  Gets the list of all planets in the star system's information.

5.5.1 Detailed Description

Renders all information into the main HUD's list box on the hovered star system. Also displays the name of all the star systems planets.

5.5.2 Constructor & Destructor Documentation

5.5.2.1 GalaxyRenderSystem()

```
MidnightBlue.GalaxyRenderSystem.GalaxyRenderSystem (
            SpriteBatch spriteBatch,
            ContentManager content ) [inline]
```

Initializes a new instance of the T:MidnightBlue.GalaxyRenderSystem class.

Parameters

spriteBatch	Sprite batch to draw to.
content	Content to load fonts from.

5.5.3 Member Function Documentation

5.5.3.1 PreProcess()

```
override void MidnightBlue.GalaxyRenderSystem.PreProcess ( )  [inline], [protected]
```

Clears the starsystems info list before processing all entities.

5.5.3.2 Process()

```
override void MidnightBlue.GalaxyRenderSystem.Process (
            Entity entity )  [inline], [protected]
```

Checks for collisions with a star system in the galaxy view and renders any information associated with that star re:planets.

Parameters

entity	Entity to check collisions with.

5.5.4 Property Documentation

5.5.4.1 InfoList

```
List<string> MidnightBlue.GalaxyRenderSystem.InfoList  [get]
```

Gets the list of all planets in the star system's information.

The info list.

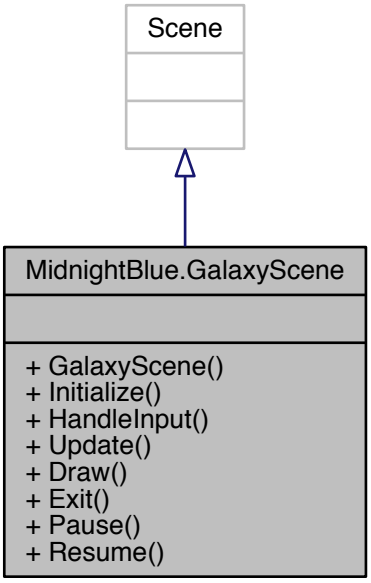
The documentation for this class was generated from the following file:

- Shared/src/Game/Systems/GalaxyRenderSystem.cs

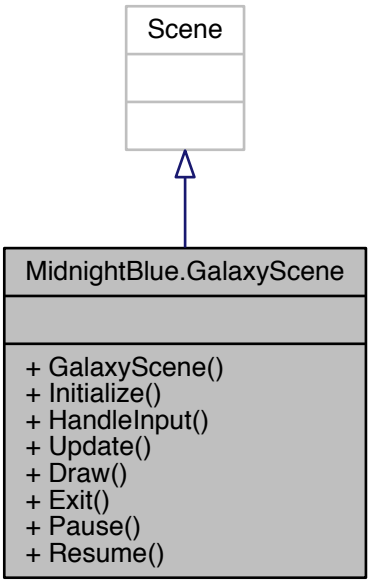
5.6 MidnightBlue.GalaxyScene Class Reference

The scene displayed at the galaxy view - handles the control over all systems, loading, and content management for the scene.

Inheritance diagram for MidnightBlue.GalaxyScene:



Collaboration diagram for MidnightBlue.GalaxyScene:



Public Member Functions

- GalaxyScene (EntityMap map, ContentManager content)

  Initializes a new instance of the T:MB2D.GalaxyScene class. Loads all resources and sets up the galaxy for generation.
- override void Initialize ()

  Initializes the galaxy generation and background music - sets up the players ship and the collision bounds.
- override void HandleInput ()

  Handles all input for the player ship and moves between galaxy and star system scenes if the player enters a star system.
- override void Update ()

  Updates the galaxy view and fuel consumption if not loading.
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draw the game world and UI to the specified spriteBatch and uiSpriteBatch.
- override void Exit ()

  Exit this scene instantly.
- override void Pause ()

  Fades the sound out when transitioning to another scene unless the next scene is the star system scene.
- override void Resume ()

  Resets the physics environment when returning to the scene and rebuilds the galaxy from its cache.

5.6.1 Detailed Description

The scene displayed at the galaxy view - handles the control over all systems, loading, and content management for the scene.

5.6.2 Constructor & Destructor Documentation

5.6.2.1 GalaxyScene()

```
MidnightBlue.GalaxyScene.GalaxyScene (
            EntityMap map,
            ContentManager content )  [inline]
```

Initializes a new instance of the T:MB2D.GalaxyScene class. Loads all resources and sets up the galaxy for generation.

Parameters

map	Game objects to use.
content	Content manager to use.

5.6.3 Member Function Documentation

5.6.3.1 Draw()

```
override void MidnightBlue.GalaxyScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draw the game world and UI to the specified spriteBatch and uiSpriteBatch.

Parameters

spriteBatch	Sprite batch for world-based entities.
uiSpriteBatch	User interface sprite batch.

5.6.3.2 Exit()

```
override void MidnightBlue.GalaxyScene.Exit ( )  [inline]
```

Exit this scene instantly.

5.6.3.3 HandleInput()

```
override void MidnightBlue.GalaxyScene.HandleInput ( )  [inline]
```

Handles all input for the player ship and moves between galaxy and star system scenes if the player enters a star system.

5.6.3.4 Initialize()

```
override void MidnightBlue.GalaxyScene.Initialize ( )  [inline]
```

Initializes the galaxy generation and background music - sets up the players ship and the collision bounds.

5.6.3.5 Pause()

```
override void MidnightBlue.GalaxyScene.Pause ( )  [inline]
```

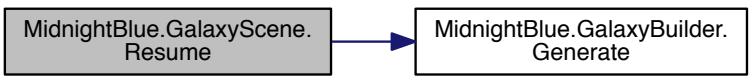
Fades the sound out when transitioning to another scene unless the next scene is the star system scene.

5.6.3.6 Resume()

```
override void MidnightBlue.GalaxyScene.Resume ( )  [inline]
```

Resets the physics environment when returning to the scene and rebuilds the galaxy from its cache.

Here is the call graph for this function:

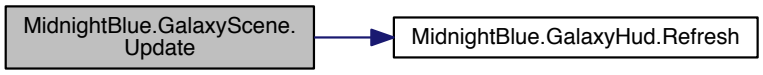


5.6.3.7 Update()

```
override void MidnightBlue.GalaxyScene.Update ( )  [inline]
```

Updates the galaxy view and fuel consumption if not loading.

Here is the call graph for this function:

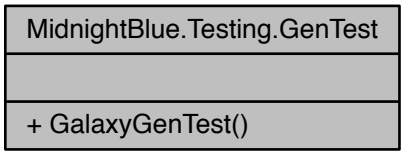


The documentation for this class was generated from the following file:

- Shared/src/Game/Scenes/GalaxyScene.cs

5.7 MidnightBlue.Testing.GenTest Class Reference

Collaboration diagram for MidnightBlue.Testing.GenTest:



Static Public Member Functions

- static void **GalaxyGenTest** (params string[ ] args)

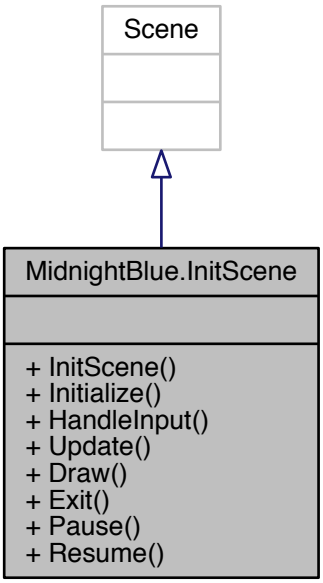
The documentation for this class was generated from the following file:

- Shared/src/Game/Tests/GenTest.cs

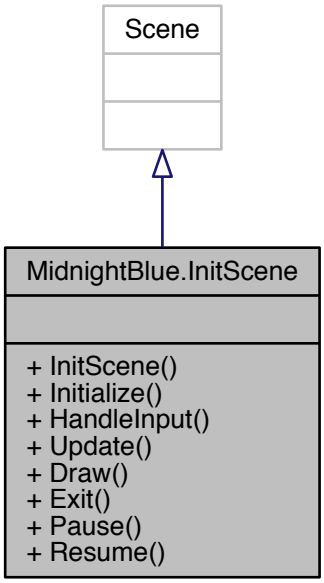
5.8 MidnightBlue.InitScene Class Reference

The scene shown at the title screen.

Inheritance diagram for MidnightBlue.InitScene:



Collaboration diagram for MidnightBlue.InitScene:



Public Member Functions

- InitScene (EntityMap map, ContentManager content)

  Initializes a new instance of the T:MidnightBlue.InitScene class. Loads all blueprints and setup data.
- override void Initialize ()

  Registers all blueprints to the EntityMap
- override void HandleInput ()

  Handles the input for the scene.
- override void Update ()

  Updates the scene.
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draws the scene to the uiSpriteBatch
- override void Exit ()

  Exits the scene.
- override void Pause ()

  Pauses the scene.
- override void Resume ()

  Resumes the scene.

5.8.1 Detailed Description

The scene shown at the title screen.

5.8.2 Constructor & Destructor Documentation

5.8.2.1 InitScene()

```
MidnightBlue.InitScene.InitScene (
            EntityMap map,
            ContentManager content )  [inline]
```

Initializes a new instance of the T:MidnightBlue.InitScene class. Loads all blueprints and setup data.

Parameters

map	Game objects.
content	Content manager for loading textures and sounds.

5.8.3 Member Function Documentation

5.8.3.1 Draw()

```
override void MidnightBlue.InitScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draws the scene to the uiSpriteBatch

Parameters

spriteBatch	Sprite batch for world-based entities.
uiSpriteBatch	User interface sprite batch.

5.8.3.2 Exit()

```
override void MidnightBlue.InitScene.Exit ( )  [inline]
```

Exits the scene.

5.8.3.3 HandleInput()

```
override void MidnightBlue.InitScene.HandleInput ( )  [inline]
```

Handles the input for the scene.

5.8.3.4 Initialize()

```
override void MidnightBlue.InitScene.Initialize ( )  [inline]
```

Registers all blueprints to the EntityMap

5.8.3.5 Pause()

```
override void MidnightBlue.InitScene.Pause ( )  [inline]
```

Pauses the scene.

5.8.3.6 Resume()

```
override void MidnightBlue.InitScene.Resume ( )  [inline]
```

Resumes the scene.

5.8.3.7 Update()

```
override void MidnightBlue.InitScene.Update ( )  [inline]
```

Updates the scene.

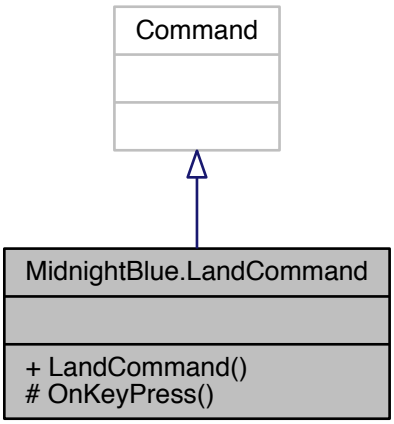
The documentation for this class was generated from the following file:

- Shared/src/Game/Scenes/InitScene.cs

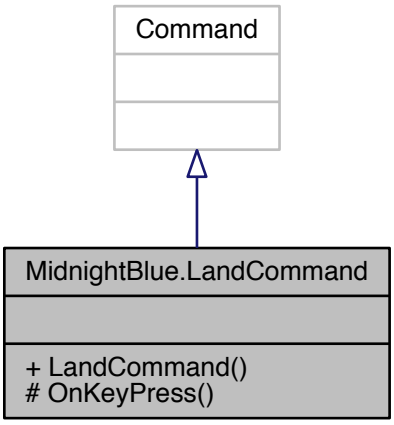
5.9 MidnightBlue.LandCommand Class Reference

Lands the ship

Inheritance diagram for MidnightBlue.LandCommand:



Collaboration diagram for MidnightBlue.LandCommand:



Public Member Functions

- LandCommand (Keys key, CommandType type)

  Initializes a new instance of the T:MidnightBlue.LandCommand class.

Protected Member Functions

- override void OnKeyPress (Entity e)

  Lands the ship on the key press if terrain is landable

5.9.1 Detailed Description

Lands the ship

5.9.2 Constructor & Destructor Documentation

5.9.2.1 LandCommand()

```
MidnightBlue.LandCommand.LandCommand (
            Keys key,
            CommandType type )  [inline]
```

Initializes a new instance of the T:MidnightBlue.LandCommand class.

Parameters

key	Key to assign to.
type	Trigger type.

5.9.3 Member Function Documentation

5.9.3.1 OnKeyPress()

```
override void MidnightBlue.LandCommand.OnKeyPress (
            Entity e )  [inline], [protected]
```

Lands the ship on the key press if terrain is landable

Parameters

e	Entity with the ship controller to operate on.

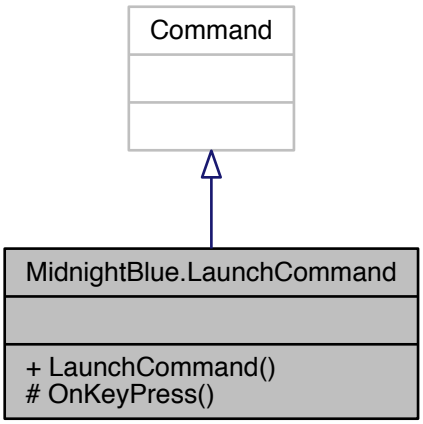
The documentation for this class was generated from the following file:

- Shared/src/Game/Commands/ShipCommands.cs

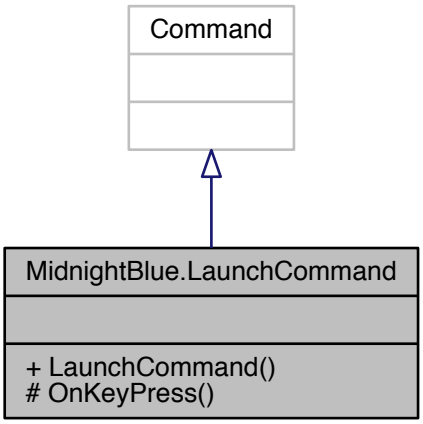
5.10 MidnightBlue.LaunchCommand Class Reference

Launches the ship from a landed state

Inheritance diagram for MidnightBlue.LaunchCommand:



Collaboration diagram for MidnightBlue.LaunchCommand:



Public Member Functions

- LaunchCommand (Keys key, CommandType type)

  Initializes a new instance of the T:MidnightBlue.LaunchCommand class.

Protected Member Functions

- override void OnKeyPress (Entity e)

  Launches the ship from landed on key press.

5.10.1 Detailed Description

Launches the ship from a landed state

5.10.2 Constructor & Destructor Documentation

5.10.2.1 LaunchCommand()

```
MidnightBlue.LaunchCommand.LaunchCommand (
            Keys key,
            CommandType type )  [inline]
```

Initializes a new instance of the T:MidnightBlue.LaunchCommand class.

Parameters

key	Key to assign to.
type	Trigger type.

5.10.3 Member Function Documentation

5.10.3.1 OnKeyPress()

```
override void MidnightBlue.LaunchCommand.OnKeyPress (
            Entity e )  [inline], [protected]
```

Launches the ship from landed on key press.

Parameters

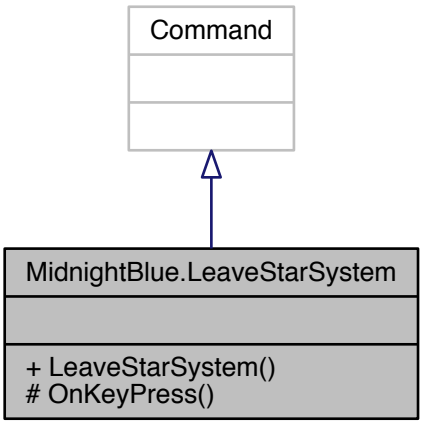
e	Entity with ship controller to operate on.

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

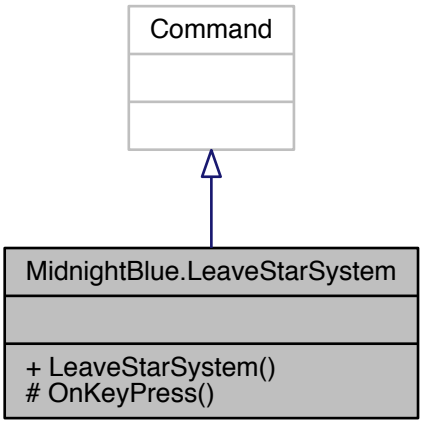
- Shared/src/Game/Commands/ShipCommands.cs

5.11 MidnightBlue.LeaveStarSystem Class Reference

Inheritance diagram for MidnightBlue.LeaveStarSystem:



Collaboration diagram for MidnightBlue.LeaveStarSystem:



Public Member Functions

- LeaveStarSystem (Keys key, CommandType type)

  Initializes a new instance of the T:MidnightBlue.LeaveStarSystem class.

Protected Member Functions

- override void **OnKeyPress** (Entity e=null)

5.11.1 Constructor & Destructor Documentation

5.11.1.1 LeaveStarSystem()

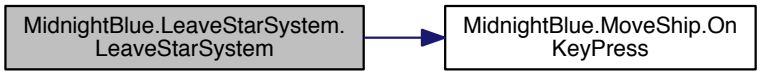
```
MidnightBlue.LeaveStarSystem.LeaveStarSystem (
            Keys key,
            CommandType type )  [inline]
```

Initializes a new instance of the T:MidnightBlue.LeaveStarSystem class.

Parameters

key	Key to assign to.
type	Trigger type.

Here is the call graph for this function:



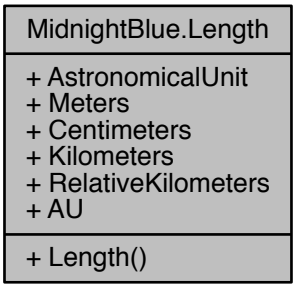
The documentation for this class was generated from the following file:

- Shared/src/Game/Commands/ShipCommands.cs

5.12 MidnightBlue.Length Class Reference

Defines a measurement of length in meters able to be converted to other measurements.

Collaboration diagram for MidnightBlue.Length:



Public Member Functions

- Length (ulong meters)

  Initializes a new instance of the T:MidnightBlue.Length class.

Public Attributes

- const float AstronomicalUnit = 149597870.7f

  A single Astronomical Unit in kilometers

Properties

- ulong Meters [get]

  Gets the length in meters
- ulong Centimeters [get]

  Gets the length in centimeters
- ulong Kilometers [get]

  Gets the length in kilometers
- int RelativeKilometers [get]

  Gets the length in kilometers represented as a smaller value used for calculations.
- float AU [get]

  Gets the length in Astronomical Unites

5.12.1 Detailed Description

Defines a measurement of length in meters able to be converted to other measurements.

5.12.2 Constructor & Destructor Documentation

5.12.2.1 Length()

```
MidnightBlue.Length.Length (
            ulong meters )  [inline]
```

Initializes a new instance of the T:MidnightBlue.Length class.

Parameters

meters	Initial length to set in meters.

5.12.3 Member Data Documentation

5.12.3.1 AstronomicalUnit

```
const float MidnightBlue.Length.AstronomicalUnit = 149597870.7f
```

A single Astronomical Unit in kilometers

5.12.4 Property Documentation

5.12.4.1 AU

```
float MidnightBlue.Length.AU  [get]
```

Gets the length in Astronomical Unites

The length in astronomical units.

5.12.4.2 Centimeters

```
ulong MidnightBlue.Length.Centimeters  [get]
```

Gets the length in centimeters

The length in centimeters.

5.12.4.3 Kilometers

```
ulong MidnightBlue.Length.Kilometers  [get]
```

Gets the length in kilometers

The length in kilometers.

5.12.4.4 Meters

```
ulong MidnightBlue.Length.Meters  [get]
```

Gets the length in meters

The length in meters.

5.12.4.5 RelativeKilometers

```
int MidnightBlue.Length.RelativeKilometers  [get]
```

Gets the length in kilometers represented as a smaller value used for calculations.

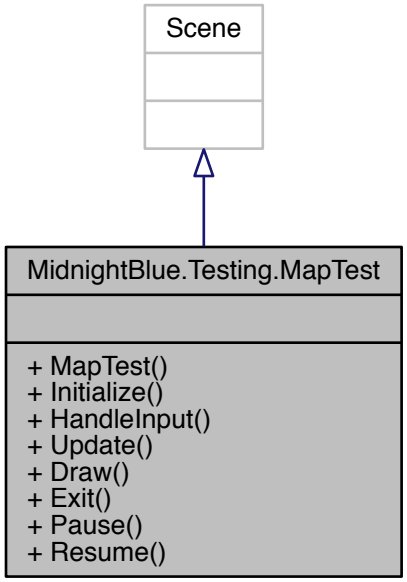
The length in relative kilometers.

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

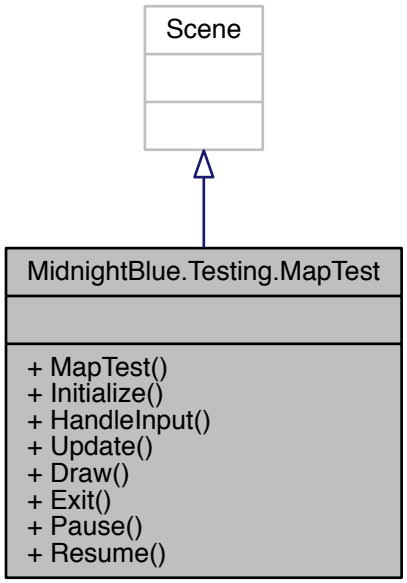
- Shared/src/Game/Environment/Length.cs

5.13 MidnightBlue.Testing.MapTest Class Reference

Inheritance diagram for MidnightBlue.Testing.MapTest:



Collaboration diagram for MidnightBlue.Testing.MapTest:



Public Member Functions

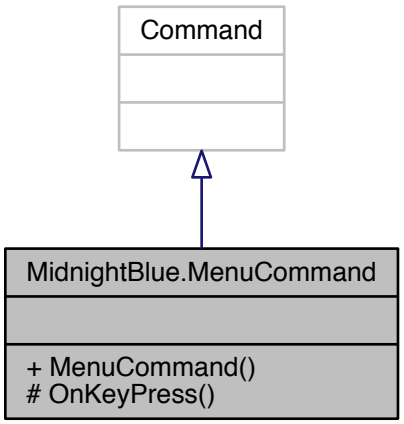
- **MapTest** (EntityMap map, ContentManager content)
- override void **Initialize** ()
- override void **HandleInput** ()
- override void **Update** ()
- override void **Draw** (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)
- override void **Exit** ()
- override void **Pause** ()
- override void **Resume** ()

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

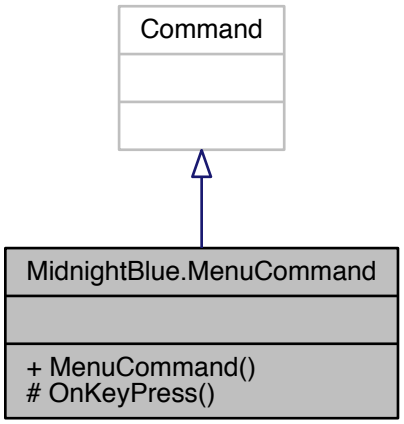
- Shared/src/Game/Tests/MapTest.cs

5.14 MidnightBlue.MenuCommand Class Reference

Inheritance diagram for MidnightBlue.MenuCommand:



Collaboration diagram for MidnightBlue.MenuCommand:



Public Member Functions

- **MenuCommand** (Keys key, CommandType commandType, SceneStack sceneController, ContentManager content)

Protected Member Functions

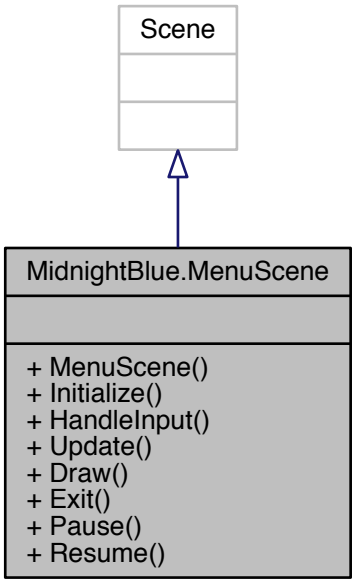
- override void **OnKeyPress** (Entity e=null)

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

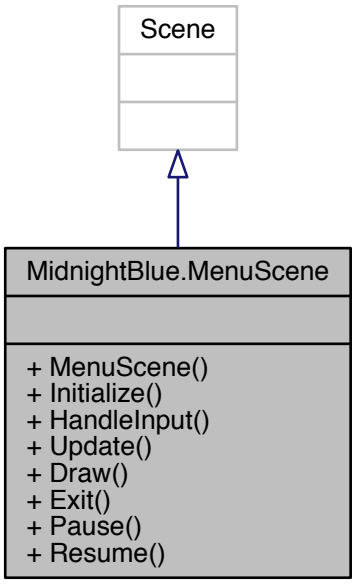
- Shared/src/Game/Commands/MenuCommand.cs

5.15 MidnightBlue.MenuScene Class Reference

Inheritance diagram for MidnightBlue.MenuScene:



Collaboration diagram for MidnightBlue.MenuScene:



Public Member Functions

- **MenuScene** (ContentManager content)
- override void Initialize ()

  Creates the UIView and starts the background music.
- override void HandleInput ()

  Handles the input for the menu.
- override void Update ()

  Updates the UI
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draws the UI to the uiSpriteBatch
- override void Exit ()

  Exits the menu
- override void Pause ()

  Pauses the scene
- override void Resume ()

  Resumes the scene

5.15.1 Member Function Documentation

5.15.1.1 Draw()

```
override void MidnightBlue.MenuScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draws the UI to the uiSpriteBatch

Parameters

spriteBatch	Sprite batch for world-based entities.
uiSpriteBatch	User interface sprite batch.

5.15.1.2 Exit()

```
override void MidnightBlue.MenuScene.Exit ( )  [inline]
```

Exits the menu

5.15.1.3 HandleInput()

```
override void MidnightBlue.MenuScene.HandleInput ( )  [inline]
```

Handles the input for the menu.

5.15.1.4 Initialize()

```
override void MidnightBlue.MenuScene.Initialize ( )  [inline]
```

Creates the UIView and starts the background music.

5.15.1.5 Pause()

```
override void MidnightBlue.MenuScene.Pause ( )  [inline]
```

Pauses the scene

5.15.1.6 Resume()

```
override void MidnightBlue.MenuScene.Resume ( )  [inline]
```

Resumes the scene

5.15.1.7 Update()

```
override void MidnightBlue.MenuScene.Update ( )  [inline]
```

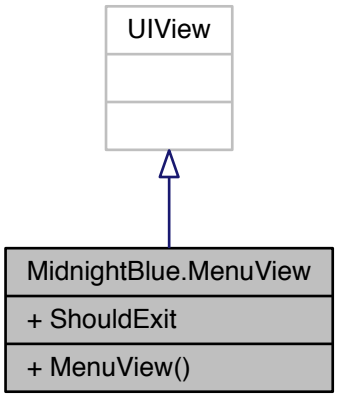
Updates the UI

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

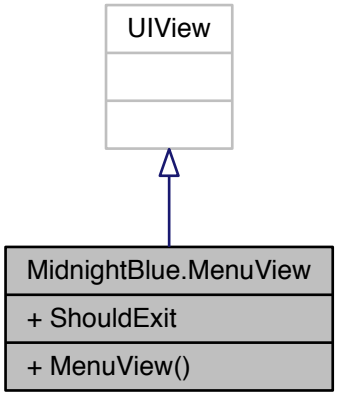
- Shared/src/Game/Scenes/MenuScene.cs

5.16 MidnightBlue.MenuView Class Reference

Inheritance diagram for MidnightBlue.MenuView:



Collaboration diagram for MidnightBlue.MenuView:



Public Member Functions

- **MenuView** (ContentManager content)

Properties

- bool **ShouldExit** `[get]`

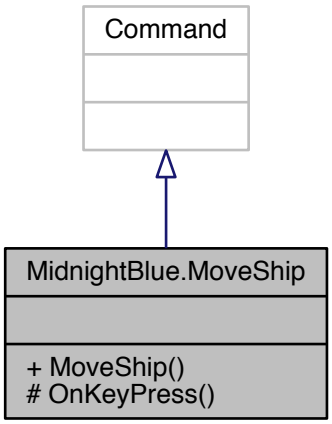
The documentation for this class was generated from the following file:

- Shared/src/Game/UIViews/MenuView.cs

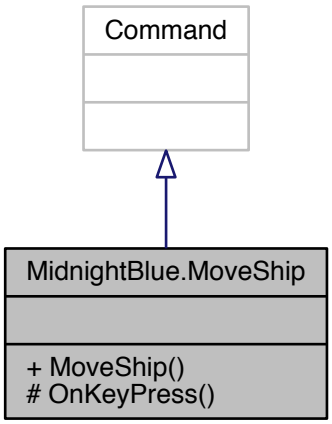
5.17 MidnightBlue.MoveShip Class Reference

Performs logic aside from movement required to execute when moving the ship such as consuming fuel.

Inheritance diagram for MidnightBlue.MoveShip:



Collaboration diagram for MidnightBlue.MoveShip:



Public Member Functions

- MoveShip (Keys key, CommandType type)

  Initializes a new instance of the T:MidnightBlue.MoveShip class.

Protected Member Functions

- override void OnKeyPress (Entity e)

  Consumes fuel, stopping the ship if there's none remaining

5.17.1 Detailed Description

Performs logic aside from movement required to execute when moving the ship such as consuming fuel.

5.17.2 Constructor & Destructor Documentation

5.17.2.1 MoveShip()

```
MidnightBlue.MoveShip.MoveShip (
            Keys key,
            CommandType type )  [inline]
```

Initializes a new instance of the T:MidnightBlue.MoveShip class.

Parameters

key	Key to assign to.
type	Trigger type.

5.17.3 Member Function Documentation

5.17.3.1 OnKeyPress()

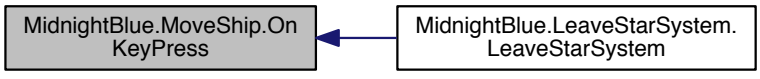
```
override void MidnightBlue.MoveShip.OnKeyPress (
            Entity e )  [inline], [protected]
```

Consumes fuel, stopping the ship if there's none remaining

Parameters

e	Entity with inventory to operate on.

Here is the caller graph for this function:



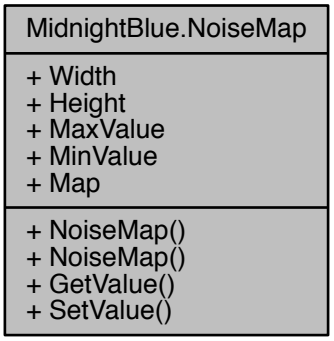
The documentation for this class was generated from the following file:

- Shared/src/Game/Commands/ShipCommands.cs

5.18 MidnightBlue.NoiseMap Class Reference

Generates a fractal 2D map using Simplex Noise

Collaboration diagram for MidnightBlue.NoiseMap:



Public Member Functions

- NoiseMap (ImplicitModuleBase fractal, int width, int height, int seed)

  Initializes a new instance of the T:MidnightBlue.NoiseMap class. Initializes the fractal generator to use Simplex Noise
- NoiseMap (ImplicitModuleBase fractal, int width, int height)

  Initializes a new instance of the T:MidnightBlue.NoiseMap class. Initializes the fractal generator to use Simplex Noise
- double GetValue (int x, int y)

  Gets a noise value at the specified x and y coordinates. Returned as a normalized value in the range of 0 - 1
- void SetValue (int x, int y, double value)

  Sets a noise value at the specified x and y coordinates. Assigned as a normalized value in the range of 0 - 1

Properties

- int Width `[get]`

  Gets the width of the noise map.
- int Height `[get]`

  Gets the height of the noise map.
- double MaxValue `[get]`

  Gets the maximum value found in the currently generated noise map.
- double MinValue `[get]`

  Gets the minimum value found in the currently generated noise map.
- ImplicitModuleBase Map `[get]`

  Gets the internal map.

5.18.1 Detailed Description

Generates a fractal 2D map using Simplex Noise

5.18.2 Constructor & Destructor Documentation

5.18.2.1 NoiseMap() [1/2]

```
MidnightBlue.NoiseMap.NoiseMap (
            ImplicitModuleBase fractal,
            int width,
            int height,
            int seed )  [inline]
```

Initializes a new instance of the T:MidnightBlue.NoiseMap class. Initializes the fractal generator to use Simplex Noise

Parameters

width	Width of the noise map.
height	Height of the noise map.
seed	Seed to use in generating the noise map.

5.18.2.2 NoiseMap() [2/2]

```
MidnightBlue.NoiseMap.NoiseMap (
            ImplicitModuleBase fractal,
            int width,
            int height )  [inline]
```

Initializes a new instance of the T:MidnightBlue.NoiseMap class. Initializes the fractal generator to use Simplex Noise

Parameters

width	Width of the noise map.
height	Height of the noise map.

5.18.3 Member Function Documentation

5.18.3.1 GetValue()

```
double MidnightBlue.NoiseMap.GetValue (
            int x,
            int y )  [inline]
```

Gets a noise value at the specified x and y coordinates. Returned as a normalized value in the range of 0 - 1

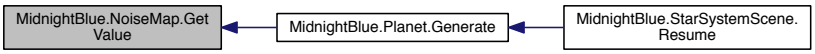
Returns

The noise value.

Parameters

x	The x coordinate.
y	The y coordinate.

Here is the caller graph for this function:



5.18.3.2 SetValue()

```
void MidnightBlue.NoiseMap.SetValue (
            int x,
            int y,
            double value )  [inline]
```

Sets a noise value at the specified x and y coordinates. Assigned as a normalized value in the range of 0 - 1

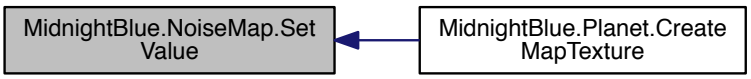
Returns

The noise value.

Parameters

x	The x coordinate.
y	The y coordinate.

Here is the caller graph for this function:



5.18.4 Property Documentation

5.18.4.1 Height

```
int MidnightBlue.NoiseMap.Height  [get]
```

Gets the height of the noise map.

The height.

5.18.4.2 Map

```
ImplicitModuleBase MidnightBlue.NoiseMap.Map  [get]
```

Gets the internal map.

The map.

5.18.4.3 MaxValue

```
double MidnightBlue.NoiseMap.MaxValue  [get]
```

Gets the maximum value found in the currently generated noise map.

The max value.

5.18.4.4 MinValue

```
double MidnightBlue.NoiseMap.MinValue  [get]
```

Gets the minimum value found in the currently generated noise map.

The max value.

5.18.4.5 Width

```
int MidnightBlue.NoiseMap.Width  [get]
```

Gets the width of the noise map.

The width.

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

- Shared/src/Game/Environment/NoiseMap.cs

5.19 MidnightBlue.Planet Class Reference

A fully-generated planet in a star system with associated texture maps.

Collaboration diagram for MidnightBlue.Planet:

Public Member Functions

- Planet (PlanetMetadata meta, int seed)

  Initializes a new instance of the T:MidnightBlue.Planet class and sets up all noise maps ready for generation.
- void Generate (Random rand)

  Generates the planet after setting up with pre-defined metadata parameters.
- void CreateMapTexture (ContentManager content)

  Creates the biome map texture and planet mask texture to use for rendering to star system view and to use as maps.
- Texture2D GetMapLayer (string layerName)

  Gets one of the planets generated noise map textures

Properties

- PlanetTile [,] Tiles `[get]`

  Gets all the tiles in the generated planet
- Point Size `[get]`

  Gets the rectangular size of the planets tile map
- string Name `[get]`

  Gets the name of the planet
- PlanetMetadata Meta `[get]`

  Gets the planets assigned metadata parameters
- Vector2 Position `[get, set]`

  Gets or sets the planets position in the star system scene
- bool Generated `[get]`

  Gets a value indicating whether this T:MidnightBlue.Planet is generated or only setup ready to be generated.

5.19.1 Detailed Description

A fully-generated planet in a star system with associated texture maps.

5.19.2 Constructor & Destructor Documentation

5.19.2.1 Planet()

```
MidnightBlue.Planet.Planet (
            PlanetMetadata meta,
            int seed )  [inline]
```

Initializes a new instance of the T:MidnightBlue.Planet class and sets up all noise maps ready for generation.

Parameters

meta	Metadata received from the planet view to act as parameters for generation.
seed	Seed to use in generating the map.

5.19.3 Member Function Documentation

5.19.3.1 CreateMapTexture()

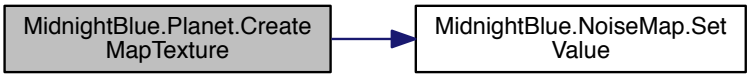
```
void MidnightBlue.Planet.CreateMapTexture (
            ContentManager content )  [inline]
```

Creates the biome map texture and planet mask texture to use for rendering to star system view and to use as maps.

Parameters

content	Content manager for loading textures.

Here is the call graph for this function:



5.19.3.2 Generate()

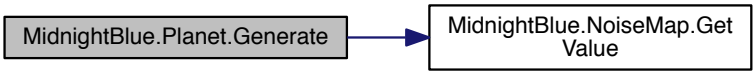
```
void MidnightBlue.Planet.Generate (
            Random rand )  [inline]
```

Generates the planet after setting up with pre-defined metadata parameters.

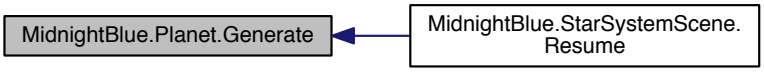
Parameters

rand	Random number generator from galaxy view to use in generating the planet.

Here is the call graph for this function:



Here is the caller graph for this function:



5.19.3.3 GetMapLayer()

```
Texture2D MidnightBlue.Planet.GetMapLayer (
            string layerName )  [inline]
```

Gets one of the planets generated noise map textures

Returns

The map layer.

Parameters

layerName	Layer name.

Here is the caller graph for this function:

5.19.4 Property Documentation

5.19.4.1 Generated

```
bool MidnightBlue.Planet.Generated  [get]
```

Gets a value indicating whether this T:MidnightBlue.Planet is generated or only setup ready to be generated.

`true` if generated; otherwise, `false`.

5.19.4.2 Meta

```
PlanetMetadata MidnightBlue.Planet.Meta  [get]
```

Gets the planets assigned metadata parameters

The metadata.

5.19.4.3 Name

```
string MidnightBlue.Planet.Name  [get]
```

Gets the name of the planet

The name.

5.19.4.4 Position

```
Vector2 MidnightBlue.Planet.Position  [get], [set]
```

Gets or sets the planets position in the star system scene

The position.

5.19.4.5 Size

```
Point MidnightBlue.Planet.Size  [get]
```

Gets the rectangular size of the planets tile map

The size of the planet.

5.19.4.6 Tiles

```
PlanetTile [,] MidnightBlue.Planet.Tiles  [get]
```

Gets all the tiles in the generated planet

The tiles.

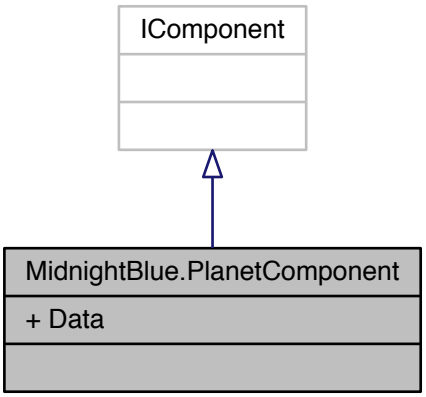
The documentation for this class was generated from the following file:

- Shared/src/Game/Environment/Planet.cs

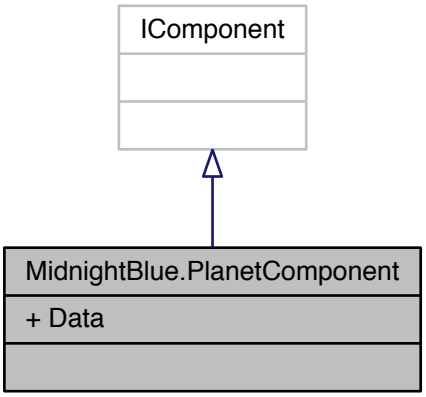
5.20 MidnightBlue.PlanetComponent Class Reference

Represents a planet entity with pre-generated metadata

Inheritance diagram for MidnightBlue.PlanetComponent:



Collaboration diagram for MidnightBlue.PlanetComponent:



Properties

- Planet Data `[get, set]`

  All pre-generated arguments used when generating a planets map

5.20.1 Detailed Description

Represents a planet entity with pre-generated metadata

5.20.2 Property Documentation

5.20.2.1 Data

```
Planet MidnightBlue.PlanetComponent.Data [get], [set]
```

All pre-generated arguments used when generating a planets map

The data.

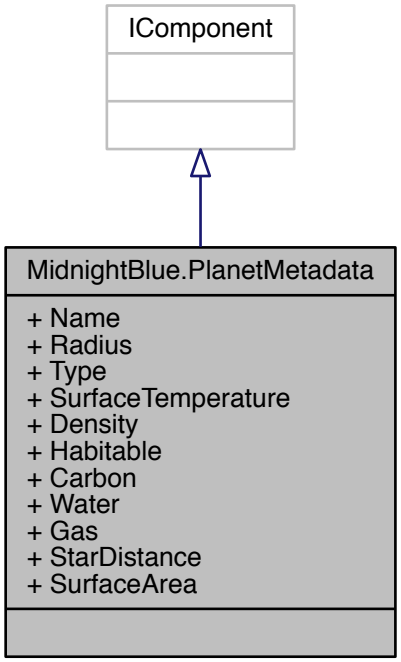
The documentation for this class was generated from the following file:

- Shared/src/Game/Components/PlanetComponent.cs

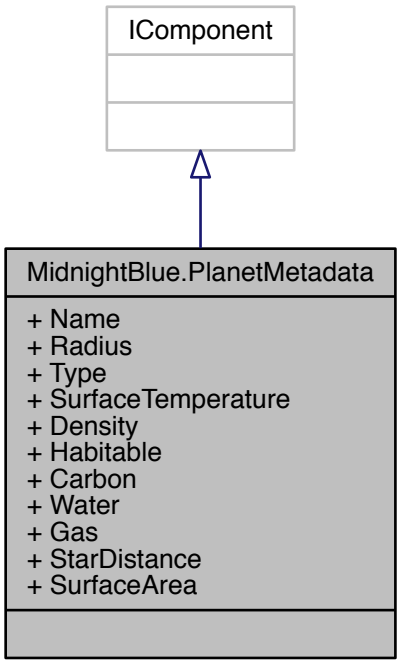
5.21 MidnightBlue.PlanetMetadata Class Reference

Planet metadata used as information and arguments for generating the actual biome map of a planet. Required for an entity to be treated as a planet.

Inheritance diagram for MidnightBlue.PlanetMetadata:



Collaboration diagram for MidnightBlue.PlanetMetadata:



Properties

- string Name `[get, set]`

  Gets or sets the name of the planet.
- int Radius `[get, set]`

  Gets or sets the radius of the planet.
- PlanetType Type `[get, set]`

  Gets or sets the type of the planet.
- float SurfaceTemperature `[get, set]`

  Gets or sets the surface temperature.
- int Density `[get, set]`

  Gets or sets the density.
- float Habitable `[get, set]`

  Gets or sets the score indicating the planets ability to support life.
- int Carbon `[get, set]`

  Gets or sets the amount of carbon on the planet.
- int Water `[get, set]`

  Gets or sets the amount of water on the planet.
- int Gas `[get, set]`

  Gets or sets the amount of gas on the planet.
- Length StarDistance `[get, set]`

  Gets or sets the distance of this planet to its star
- float SurfaceArea `[get]`

  Gets the surface area of the planet. Used mostly for information displays - not very useful for anything else.

5.21.1 Detailed Description

Planet metadata used as information and arguments for generating the actual biome map of a planet. Required for an entity to be treated as a planet.

5.21.2 Property Documentation

5.21.2.1 Carbon

```
int MidnightBlue.PlanetMetadata.Carbon  [get], [set]
```

Gets or sets the amount of carbon on the planet.

The carbon amount.

5.21.2.2 Density

```
int MidnightBlue.PlanetMetadata.Density  [get], [set]
```

Gets or sets the density.

The density.

5.21.2.3 Gas

```
int MidnightBlue.PlanetMetadata.Gas  [get], [set]
```

Gets or sets the amount of gas on the planet.

The gas amount.

5.21.2.4 Habitable

```
float MidnightBlue.PlanetMetadata.Habitable  [get], [set]
```

Gets or sets the score indicating the planets ability to support life.

The life score.

5.21.2.5 Name

```
string MidnightBlue.PlanetMetadata.Name  [get], [set]
```

Gets or sets the name of the planet.

The name.

5.21.2.6 Radius

```
int MidnightBlue.PlanetMetadata.Radius  [get], [set]
```

Gets or sets the radius of the planet.

The radius.

5.21.2.7 StarDistance

```
Length MidnightBlue.PlanetMetadata.StarDistance  [get], [set]
```

Gets or sets the distance of this planet to its star

The star distance.

5.21.2.8 SurfaceArea

```
float MidnightBlue.PlanetMetadata.SurfaceArea  [get]
```

Gets the surface area of the planet. Used mostly for information displays - not very useful for anything else.

The surface area.

5.21.2.9 SurfaceTemperature

```
float MidnightBlue.PlanetMetadata.SurfaceTemperature  [get], [set]
```

Gets or sets the surface temperature.

The surface temperature.

5.21.2.10 Type

```
PlanetType MidnightBlue.PlanetMetadata.Type  [get], [set]
```

Gets or sets the type of the planet.

The type.

5.21.2.11 Water

```
int MidnightBlue.PlanetMetadata.Water  [get], [set]
```

Gets or sets the amount of water on the planet.

The water amount.

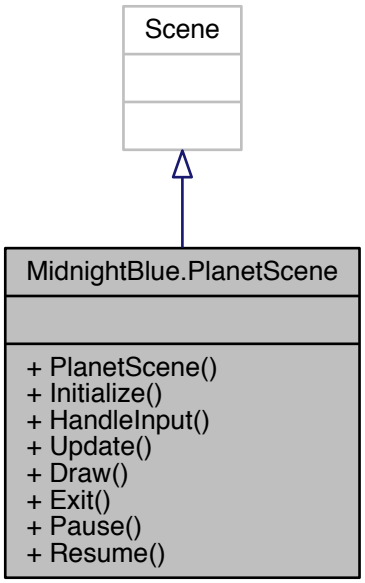
The documentation for this class was generated from the following file:

- Shared/src/Game/Environment/PlanetMetadata.cs

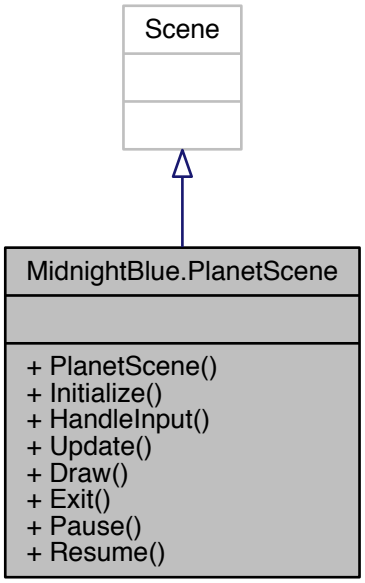
5.22 MidnightBlue.PlanetScene Class Reference

Scene active when the player is exploring a given planet.

Inheritance diagram for MidnightBlue.PlanetScene:



Collaboration diagram for MidnightBlue.PlanetScene:



Public Member Functions

- PlanetScene (EntityMap map, ContentManager content, Planet planet)

  Initializes a new instance of the T:MidnightBlue.PlanetScene class.
- override void Initialize ()

  Sets up the player and physics environment for this planet
- override void HandleInput ()

  Handles the input for the scene.
- override void Update ()

  Updates the players position and state alongside the current biome the player is located at.
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draw the tilemap to the specified spriteBatch and uiSpriteBatch.
- override void Exit ()

  Exit this scene.
- override void Pause ()

  Instantly pause the scene
- override void Resume ()

  Instantly resume the scene

5.22.1 Detailed Description

Scene active when the player is exploring a given planet.

5.22.2 Constructor & Destructor Documentation

5.22.2.1 PlanetScene()

```
MidnightBlue.PlanetScene.PlanetScene (
            EntityMap map,
            ContentManager content,
            Planet planet )  [inline]
```

Initializes a new instance of the T:MidnightBlue.PlanetScene class.

Parameters

map	Game object map.
content	Content manager for loading resources.
planet	Planet to use in this scene.

5.22.3 Member Function Documentation

5.22.3.1 Draw()

```
override void MidnightBlue.PlanetScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draw the tilemap to the specified spriteBatch and uiSpriteBatch.

Parameters

spriteBatch	Sprite batch to draw world-based entities to.
uiSpriteBatch	User interface sprite batch.

5.22.3.2 Exit()

```
override void MidnightBlue.PlanetScene.Exit ( )  [inline]
```

Exit this scene.

5.22.3.3 HandleInput()

```
override void MidnightBlue.PlanetScene.HandleInput ( )  [inline]
```

Handles the input for the scene.

5.22.3.4 Initialize()

```
override void MidnightBlue.PlanetScene.Initialize ( )  [inline]
```

Sets up the player and physics environment for this planet

5.22.3.5 Pause()

```
override void MidnightBlue.PlanetScene.Pause ( )  [inline]
```

Instantly pause the scene

5.22.3.6 Resume()

```
override void MidnightBlue.PlanetScene.Resume ( )  [inline]
```

Instantly resume the scene

5.22.3.7 Update()

```
override void MidnightBlue.PlanetScene.Update ( )  [inline]
```

Updates the players position and state alongside the current biome the player is located at.

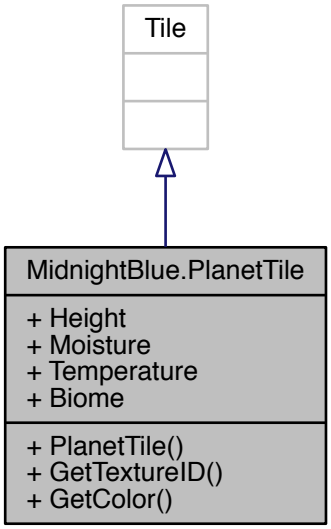
The documentation for this class was generated from the following file:

- Shared/src/Game/Scenes/PlanetScene.cs

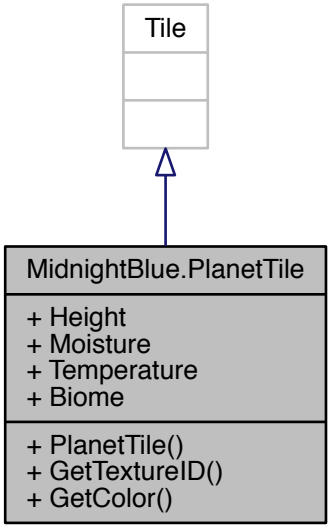
5.23 MidnightBlue.PlanetTile Class Reference

A tile type used in planet tilemaps

Inheritance diagram for MidnightBlue.PlanetTile:



Collaboration diagram for MidnightBlue.PlanetTile:



Public Member Functions

- PlanetTile (double height, double moisture, double temperature, Random rand)

  Initializes a new instance of the T:MidnightBlue.PlanetTile class, generates a biome and specifies collision data based on its biome type.
- int GetTextureID (Biome biome, Random rand)

  Gets the ID of a biomes texture region for use in a tilemap
- Color GetColor (Biome biome)

  Gets the color of a tile in the minimap based on its biome.

Properties

- HeightLevel Height `[get]`

  Gets the height category of the tile.
- MoistureLevel Moisture `[get]`

  Gets the moisture category of the tile.
- TemperatureLevel Temperature `[get]`

  Gets the temperature category of the tile.
- Biome Biome `[get]`

  Gets the biome category of the tile.

5.23.1 Detailed Description

A tile type used in planet tilemaps

5.23.2 Constructor & Destructor Documentation

5.23.2.1 PlanetTile()

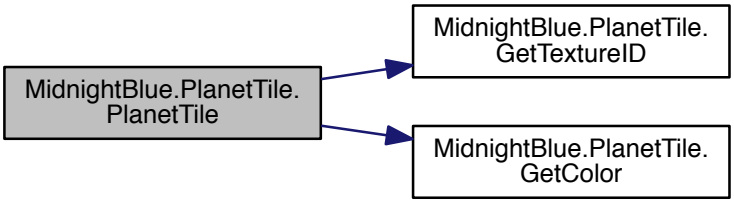
```
MidnightBlue.PlanetTile.PlanetTile (
            double height,
            double moisture,
            double temperature,
            Random rand )  [inline]
```

Initializes a new instance of the T:MidnightBlue.PlanetTile class, generates a biome and specifies collision data based on its biome type.

Parameters

height	Height value to use in generation.
moisture	Moisture value to use in generation.
temperature	Temperature value to use in generation.
rand	Random number generator used in biome generation.

Here is the call graph for this function:



5.23.3 Member Function Documentation

5.23.3.1 GetColor()

```
Color MidnightBlue.PlanetTile.GetColor (
            Biome biome )  [inline]
```

Gets the color of a tile in the minimap based on its biome.

Returns

The color.

Parameters

biome	Biome to get.

Here is the caller graph for this function:

5.23.3.2 GetTextureID()

```
int MidnightBlue.PlanetTile.GetTextureID (
            Biome biome,
            Random rand )  [inline]
```

Gets the ID of a biomes texture region for use in a tilemap

Returns

The texture region identifier.

Parameters

biome	Biome to get.
rand	Random number generator to use for varied region id's.

Here is the caller graph for this function:

5.23.4 Property Documentation

5.23.4.1 Biome

```
Biome MidnightBlue.PlanetTile.Biome  [get]
```

Gets the biome category of the tile.

The biome category.

5.23.4.2 Height

```
HeightLevel MidnightBlue.PlanetTile.Height  [get]
```

Gets the height category of the tile.

The height category.

5.23.4.3 Moisture

```
MoistureLevel MidnightBlue.PlanetTile.Moisture  [get]
```

Gets the moisture category of the tile.

The moisture category.

5.23.4.4 Temperature

```
TemperatureLevel MidnightBlue.PlanetTile.Temperature  [get]
```

Gets the temperature category of the tile.

The temperature category.

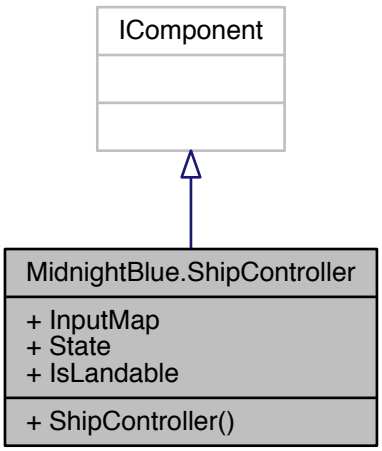
The documentation for this class was generated from the following file:

- Shared/src/Game/Environment/PlanetTile.cs

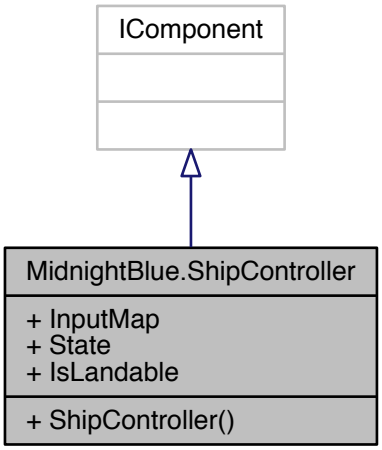
5.24 MidnightBlue.ShipController Class Reference

Controls a ships movement and actions

Inheritance diagram for MidnightBlue.ShipController:



Collaboration diagram for MidnightBlue.ShipController:



Public Member Functions

- ShipController ()

  Initializes a new instance of the T:MidnightBlue.ShipController class and assigns all default input and key mappings.

Properties

- InputMap InputMap `[get]`

  Gets the input map.
- ShipState State `[get, set]`

  Gets or sets the current travel state of the ship.
- bool IsLandable `[get, set]`

  Gets or sets a value indicating whether this T:MidnightBlue.ShipController is able to be landed when the entity calls their LandCommand.

5.24.1 Detailed Description

Controls a ships movement and actions

5.24.2 Constructor & Destructor Documentation

5.24.2.1 ShipController()

```
MidnightBlue.ShipController.ShipController ( )  [inline]
```

Initializes a new instance of the T:MidnightBlue.ShipController class and assigns all default input and key mappings.

5.24.3 Property Documentation

5.24.3.1 InputMap

```
InputMap MidnightBlue.ShipController.InputMap  [get]
```

Gets the input map.

The input map.

5.24.3.2 IsLandable

```
bool MidnightBlue.ShipController.IsLandable  [get], [set]
```

Gets or sets a value indicating whether this T:MidnightBlue.ShipController is able to be landed when the entity calls their LandCommand.

`true` if is landable; otherwise, `false`.

5.24.3.3 State

```
ShipState MidnightBlue.ShipController.State  [get], [set]
```

Gets or sets the current travel state of the ship.

The ships travelling state.

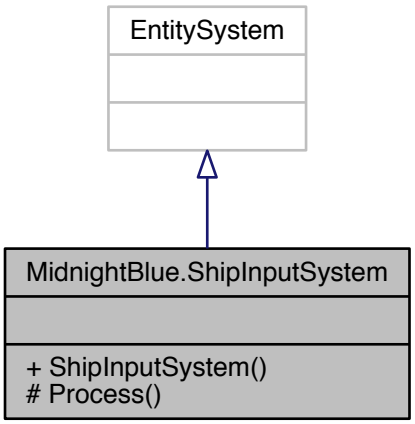
The documentation for this class was generated from the following file:

- Shared/src/Game/Components/ShipController.cs

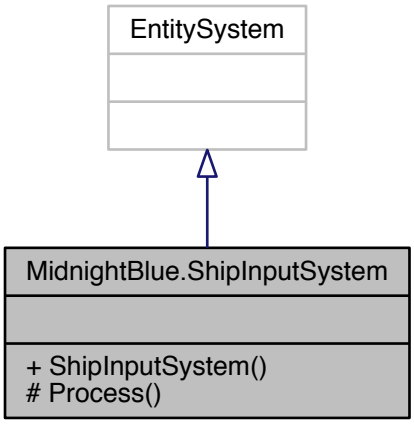
5.25 MidnightBlue.ShipInputSystem Class Reference

Handles moving the ship forward and backwards.

Inheritance diagram for MidnightBlue.ShipInputSystem:



Collaboration diagram for MidnightBlue.ShipInputSystem:



Public Member Functions

- ShipInputSystem ()

  Initializes a new instance of the T:MidnightBlue.ShipInputSystem class.

Protected Member Functions

- override void Process (Entity entity)

  Uses the entities ship controller to move forward and backward

5.25.1 Detailed Description

Handles moving the ship forward and backwards.

5.25.2 Constructor & Destructor Documentation

5.25.2.1 ShipInputSystem()

```
MidnightBlue.ShipInputSystem.ShipInputSystem ( )  [inline]
```

Initializes a new instance of the T:MidnightBlue.ShipInputSystem class.

5.25.3 Member Function Documentation

5.25.3.1 Process()

```
override void MidnightBlue.ShipInputSystem.Process (
            Entity entity )  [inline], [protected]
```

Uses the entities ship controller to move forward and backward

Parameters

entity	Entity to process.

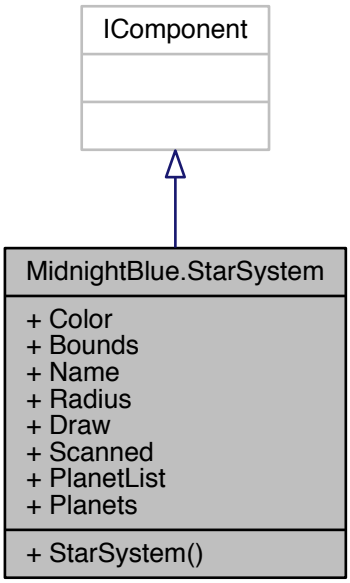
The documentation for this class was generated from the following file:

- Shared/src/Game/Systems/ShipInputSystem.cs

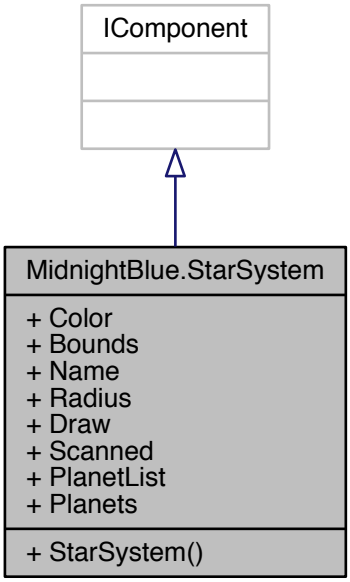
5.26 MidnightBlue.StarSystem Class Reference

Represents an star system entity to be used in the galaxy view

Inheritance diagram for MidnightBlue.StarSystem:



Collaboration diagram for MidnightBlue.StarSystem:



Public Member Functions

- StarSystem ()

  Initializes a new instance of the T:MidnightBlue.StarSystem class.

Properties

- Color Color `[get, set]`

  Gets or sets the color of the star rendered in the galaxy view.
- Rectangle Bounds `[get, set]`

  Gets or sets the bounding rectangle of the star system in the galaxy view.
- string Name `[get, set]`

  Gets or sets the name of the star system.
- int Radius `[get, set]`

  Gets or sets the radius of the star at the center of the system.
- bool Draw `[get, set]`

  Gets or sets a value indicating whether this T:MidnightBlue.StarSystem is drawn or not.
- bool Scanned `[get, set]`

  Gets or sets a value indicating whether this T:MidnightBlue.StarSystem has been scanned by the player.
- string PlanetList `[get]`

  Gets a string representation of the list of planets in the star system and all their information.
- List< PlanetMetadata > Planets `[get, set]`

  Gets or sets the list of all planets.

5.26.1 Detailed Description

Represents an star system entity to be used in the galaxy view

5.26.2 Constructor & Destructor Documentation

5.26.2.1 StarSystem()

```
MidnightBlue.StarSystem.StarSystem ( )  [inline]
```

Initializes a new instance of the T:MidnightBlue.StarSystem class.

5.26.3 Property Documentation

5.26.3.1 Bounds

```
Rectangle MidnightBlue.StarSystem.Bounds  [get], [set]
```

Gets or sets the bounding rectangle of the star system in the galaxy view.

The bounds.

5.26.3.2 Color

```
Color MidnightBlue.StarSystem.Color  [get], [set]
```

Gets or sets the color of the star rendered in the galaxy view.

The color.

5.26.3.3 Draw

```
bool MidnightBlue.StarSystem.Draw  [get], [set]
```

Gets or sets a value indicating whether this T:MidnightBlue.StarSystem is drawn or not.

`true` if should be drawn; otherwise, `false`.

5.26.3.4 Name

```
string MidnightBlue.StarSystem.Name  [get], [set]
```

Gets or sets the name of the star system.

The name.

5.26.3.5 PlanetList

```
string MidnightBlue.StarSystem.PlanetList  [get]
```

Gets a string representation of the list of planets in the star system and all their information.

The planet list.

5.26.3.6 Planets

```
List<PlanetMetadata> MidnightBlue.StarSystem.Planets  [get], [set]
```

Gets or sets the list of all planets.

The planets.

5.26.3.7 Radius

```
int MidnightBlue.StarSystem.Radius  [get], [set]
```

Gets or sets the radius of the star at the center of the system.

The radius.

5.26.3.8 Scanned

```
bool MidnightBlue.StarSystem.Scanned  [get], [set]
```

Gets or sets a value indicating whether this T:MidnightBlue.StarSystem has been scanned by the player.

`true` if scanned; otherwise, `false`.

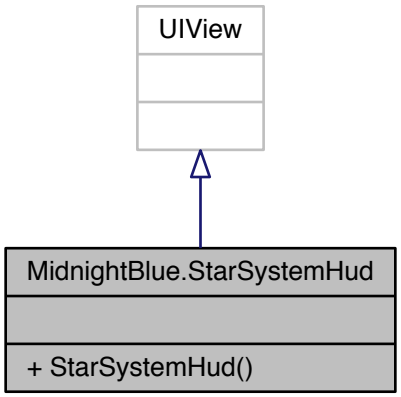
The documentation for this class was generated from the following file:

- Shared/src/Game/Components/StarSystem.cs

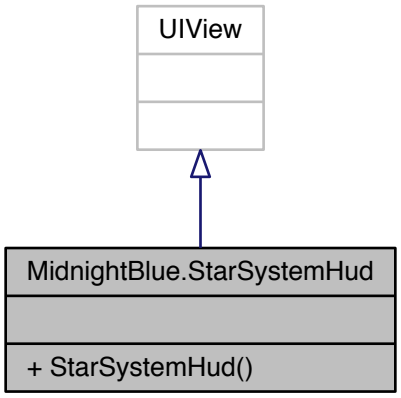
5.27 MidnightBlue.StarSystemHud Class Reference

Star system hud with minimap.

Inheritance diagram for MidnightBlue.StarSystemHud:



Collaboration diagram for MidnightBlue.StarSystemHud:



Public Member Functions

- StarSystemHud (ContentManager content, EntityMap gameObjects, SceneStack scenes)
  Initializes a new instance of the T:MidnightBlue.StarSystemHud class.

5.27.1 Detailed Description

Star system hud with minimap.

5.27.2 Constructor & Destructor Documentation

5.27.2.1 StarSystemHud()

```
MidnightBlue.StarSystemHud.StarSystemHud (
            ContentManager content,
            EntityMap gameObjects,
            SceneStack scenes )  [inline]
```

Initializes a new instance of the T:MidnightBlue.StarSystemHud class.

Parameters

content	Content to load fonts and textures with.
gameObjects	Game objects to track in the minimap.
scenes	Scene stack to use in UI interactions.

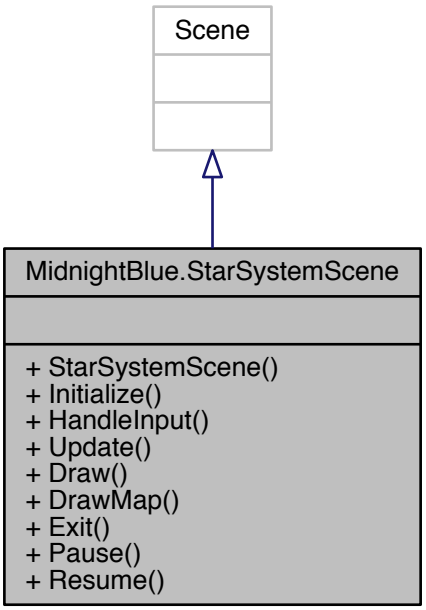
The documentation for this class was generated from the following file:

- Shared/src/Game/UIViews/StarSystemHud.cs

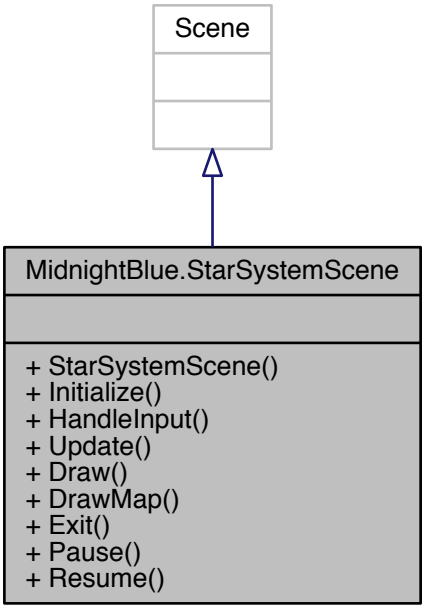
5.28 MidnightBlue.StarSystemScene Class Reference

Scene to display a star system with planets and a star.

Inheritance diagram for MidnightBlue.StarSystemScene:



Collaboration diagram for MidnightBlue.StarSystemScene:



Public Member Functions

- StarSystemScene (EntityMap map, ContentManager content, StarSystem starSystem, Dictionary< string, Planet > cache, int seed)

  Initializes a new instance of the T:MidnightBlue.StarSystemScene class.
- override void Initialize ()

  Ends initializing instantly.
- override void HandleInput ()

  Handles moving the players ship.
- override void Update ()

  Updates all systems in the game and handles the ocurrance of the player entering a planet.
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draws the star system to the sprite batch and the HUD to the UI spritebatch.
- void DrawMap (SpriteBatch uiSpriteBatch)

  Draws the minimap to the window.
- override void Exit ()

  Exits the scene instantly.
- override void Pause ()

  Pauses the scene instantly.
- override void Resume ()

  Resumes the star system scene after leaving a planet. Handles resetting the physics environment, players ship settings and reactivates all planets and the star.

5.28.1 Detailed Description

Scene to display a star system with planets and a star.

5.28.2 Constructor & Destructor Documentation

5.28.2.1 StarSystemScene()

```
MidnightBlue.StarSystemScene.StarSystemScene (
            EntityMap map,
            ContentManager content,
            StarSystem starSystem,
            Dictionary< string, Planet > cache,
            int seed )  [inline]
```

Initializes a new instance of the T:MidnightBlue.StarSystemScene class.

Parameters

map	Entity map to load entities into.
content	Content manager for loading resources.
starSystem	Star system information to use for the scene.
cache	Planet cache used for quickly loading recently-visited star systems.
seed	Seed to use in random generation.

5.28.3 Member Function Documentation

5.28.3.1 Draw()

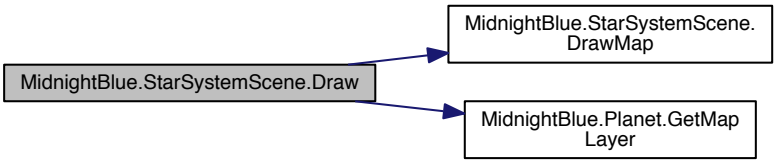
```
override void MidnightBlue.StarSystemScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draws the star system to the sprite batch and the HUD to the UI spritebatch.

Parameters

spriteBatch	Sprite batch to draw world-based entities to.
uiSpriteBatch	User interface sprite batch.

Here is the call graph for this function:



5.28.3.2 DrawMap()

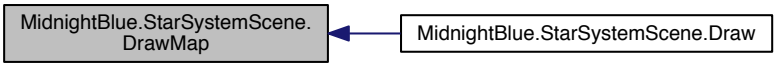
```
void MidnightBlue.StarSystemScene.DrawMap (
            SpriteBatch uiSpriteBatch )  [inline]
```

Draws the minimap to the window.

Parameters

uiSpriteBatch	User interface sprite batch to draw to.

Here is the caller graph for this function:



5.28.3.3 Exit()

```
override void MidnightBlue.StarSystemScene.Exit ( )  [inline]
```

Exits the scene instantly.

5.28.3.4 HandleInput()

```
override void MidnightBlue.StarSystemScene.HandleInput ( )  [inline]
```

Handles moving the players ship.

5.28.3.5 Initialize()

```
override void MidnightBlue.StarSystemScene.Initialize ( )  [inline]
```

Ends initializing instantly.

5.28.3.6 Pause()

```
override void MidnightBlue.StarSystemScene.Pause ( )  [inline]
```

Pauses the scene instantly.

5.28.3.7 Resume()

```
override void MidnightBlue.StarSystemScene.Resume ( )  [inline]
```

Resumes the star system scene after leaving a planet. Handles resetting the physics environment, players ship settings and reactivates all planets and the star.

Here is the call graph for this function:

5.28.3.8 Update()

```
override void MidnightBlue.StarSystemScene.Update ( )  [inline]
```

Updates all systems in the game and handles the ocurrance of the player entering a planet.

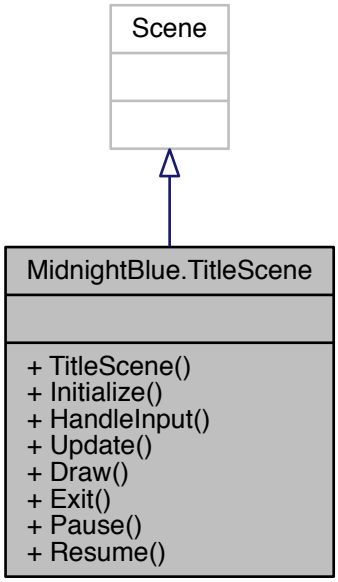
The documentation for this class was generated from the following file:

- Shared/src/Game/Scenes/StarSystemScene.cs

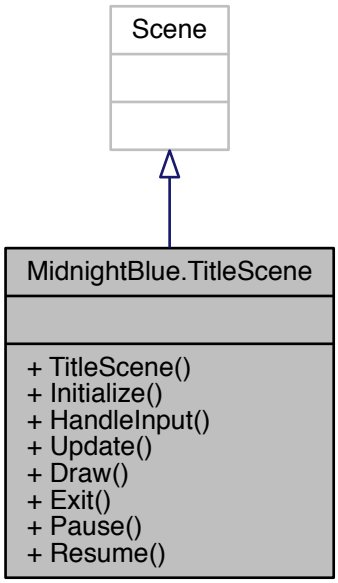
5.29 MidnightBlue.TitleScene Class Reference

The scene shown at the title screen.

Inheritance diagram for MidnightBlue.TitleScene:



Collaboration diagram for MidnightBlue.TitleScene:



Public Member Functions

- TitleScene (EntityMap map, ContentManager content)

  Initializes a new instance of the T:MidnightBlue.TitleScene class.
- override void Initialize ()

  Creates the UIView and starts the background music.
- override void HandleInput ()

  Handles the input for the menu.
- override void Update ()

  Updates the UI
- override void Draw (SpriteBatch spriteBatch, SpriteBatch uiSpriteBatch)

  Draws the UI to the uiSpriteBatch
- override void Exit ()

  Stops the music and quits instantly
- override void Pause ()

  Pauses the title screen, fading music while it does so.
- override void Resume ()

  Resumes the title screen, fading music in while it does so.

5.29.1 Detailed Description

The scene shown at the title screen.

5.29.2 Constructor & Destructor Documentation

5.29.2.1 TitleScene()

```
MidnightBlue.TitleScene.TitleScene (
            EntityMap map,
            ContentManager content )  [inline]
```

Initializes a new instance of the T:MidnightBlue.TitleScene class.

Parameters

map	Game objects.
content	Content manager for loading textures and sounds.

5.29.3 Member Function Documentation

5.29.3.1 Draw()

```
override void MidnightBlue.TitleScene.Draw (
            SpriteBatch spriteBatch,
            SpriteBatch uiSpriteBatch )  [inline]
```

Draws the UI to the uiSpriteBatch

Parameters

spriteBatch	Sprite batch for world-based entities.
uiSpriteBatch	User interface sprite batch.

5.29.3.2 Exit()

```
override void MidnightBlue.TitleScene.Exit ( )  [inline]
```

Stops the music and quits instantly

5.29.3.3 HandleInput()

```
override void MidnightBlue.TitleScene.HandleInput ( )  [inline]
```

Handles the input for the menu.

5.29.3.4 Initialize()

```
override void MidnightBlue.TitleScene.Initialize ( )  [inline]
```

Creates the UIView and starts the background music.

5.29.3.5 Pause()

```
override void MidnightBlue.TitleScene.Pause ( )  [inline]
```

Pauses the title screen, fading music while it does so.

5.29.3.6 Resume()

```
override void MidnightBlue.TitleScene.Resume ( )  [inline]
```

Resumes the title screen, fading music in while it does so.

5.29.3.7 Update()

```
override void MidnightBlue.TitleScene.Update ( )  [inline]
```

Updates the UI

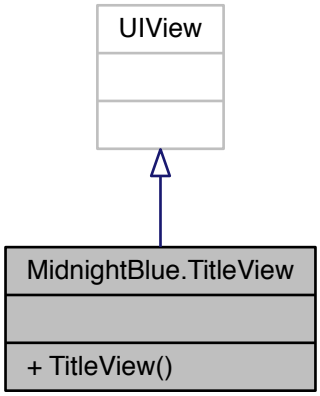
The documentation for this class was generated from the following file:

- Shared/src/Game/Scenes/TitleScene.cs

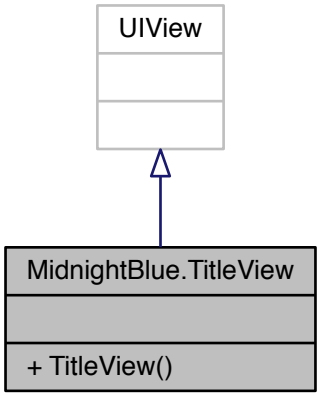
5.30 MidnightBlue.TitleView Class Reference

The title screens UI view

Inheritance diagram for MidnightBlue.TitleView:



Collaboration diagram for MidnightBlue.TitleView:



Public Member Functions

- TitleView (ContentManager content, EntityMap gameObjects, SceneStack scenes)

  Initializes a new instance of the T:MidnightBlue.TitleView class.

5.30.1 Detailed Description

The title screens UI view

5.30.2 Constructor & Destructor Documentation

5.30.2.1 TitleView()

```
MidnightBlue.TitleView.TitleView (
            ContentManager content,
            EntityMap gameObjects,
            SceneStack scenes )  [inline]
```

Initializes a new instance of the T:MidnightBlue.TitleView class.

Parameters

content	Content to load sounds, fonts, and textures from.
gameObjects	Game objects to track.
scenes	Scenes to use in UI interactions.

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

- Shared/src/Game/UIViews/TitleView.cs