Mixchemist

Generated by Doxygen 1.11.0

Chapter 1

Namespace Index

1.1 Package List

Here are the packages with brief descriptions (if available):

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Chapter 3

Class Index

3.1 Class List

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

Chapter 4

Namespace Documentation

4.1 Dungeon Namespace Reference

4.2 Dungeon.Generator Namespace Reference

Classes

- class World

4.3 Dungeon.Walker Namespace Reference

Classes

- class Walker

4.4 mixchemist2 Namespace Reference

4.5 mixchemist2.spell Namespace Reference

Classes

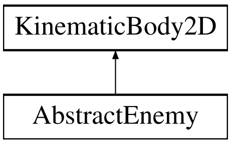
- class ConcreteSpell

Chapter 5

Class Documentation

5.1 AbstractEnemy Class Reference

Inheritance diagram for AbstractEnemy:



Public Member Functions

- override void **_Ready** ()
- override void **_Process** (float delta)
- void **Attack** ()

  Function for the enemy to damage the player on collision.
- void **TargetPlayer** ()

  Function for the enemy to walk into the direction of the player if it is in range.
- void _OnBulletHit (Node body)

  Event for when the enemy is hit by a bullet.
- void TakeDamage (int damage, Element projectileElement, Vector2 knockback)

  This method is called when the enemy takes damage.
- void SetElement (Element element)

  Setter for the element of the enemy.

5.1.1 Member Function Documentation

5.1.1.1 _OnBulletHit()

```
void AbstractEnemy._OnBulletHit (
             Node body)
```

Event for when the enemy is hit by a bullet.

Parameters

body	The body that hit the Enemy

5.1.1.2 SetElement()

```
void AbstractEnemy.SetElement (
            Element element)
```

Setter for the element of the enemy.

Parameters

element	The element the Enemy should have

5.1.1.3 TakeDamage()

```
void AbstractEnemy.TakeDamage (
            int damage,
            Element projectileElement,
            Vector2 knockback)
```

This method is called when the enemy takes damage.

Parameters

damage	The amount of Damage the Enemy should take
knockback	The desired direction the enemy should take knockback to

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

- enemy/AbstractEnemy.cs

5.2 ClassesAndEnums Class Reference

Classes

- class SpawnPosition

Public Types

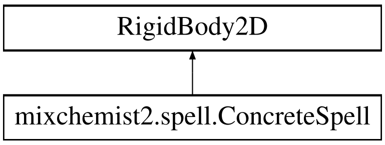
- enum **Element** {
  FIRE , **WATER** , **EARTH** , **AIR** ,
  FIRE_WATER , **FIRE_EARTH** , **FIRE_AIR** , **WATER_EARTH** ,
  WATER_AIR , **EARTH_AIR** , **FIRE_WATER_EARTH** , **FIRE_EARTH_AIR** ,
  WATER_EARTH_AIR , **FIRE_WATER_AIR** , **SHADOW** }

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

- manager/ClassesAndEnums.cs

5.3 mixchemist2.spell.ConcreteSpell Class Reference

Inheritance diagram for mixchemist2.spell.ConcreteSpell:



Public Member Functions

- override void **_Ready** ()
- override void **_Process** (float delta)
- ClassesAndEnums.Element GetElement ()

  Get the element of the spell.
- void SetElement (ClassesAndEnums.Element element)

  Set the element of the spell.
- int GetDamage ()

  Get the damage of the spell.
- Vector2 GetPosition ()

  Get the position of the spell.

Public Attributes

- int **Damage**
- ClassesAndEnums.Element **ElementType**

Properties

- Vector2 **Direction** `[get, set]`

5.3.1 Member Function Documentation

5.3.1.1 GetDamage()

```
int mixchemist2.spell.ConcreteSpell.GetDamage ()
```

Get the damage of the spell.

Returns

The amount of damage the spell does

5.3.1.2 GetElement()

```
ClassesAndEnums.Element mixchemist2.spell.ConcreteSpell.GetElement ()
```

Get the element of the spell.

Returns

The element of the spell

5.3.1.3 GetPosition()

```
Vector2 mixchemist2.spell.ConcreteSpell.GetPosition ()
```

Get the position of the spell.

Returns

The position of the spell

5.3.1.4 SetElement()

```
void mixchemist2.spell.ConcreteSpell.SetElement (
            ClassesAndEnums.Element element)
```

Set the element of the spell.

Parameters

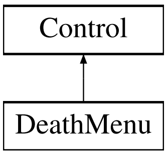
element	The element the spell should have

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

- spell/ConcreteSpell.cs

5.4 DeathMenu Class Reference

Inheritance diagram for DeathMenu:



Public Member Functions

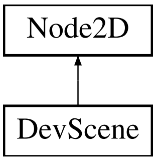
- override void **_Ready** ()

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

- UI/DeathMenu.cs

5.5 DevScene Class Reference

Inheritance diagram for DevScene:



Public Member Functions

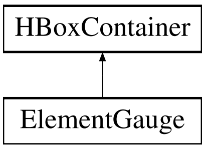
- override void **_Ready** ()

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

- devTesting/DevScene.cs

5.6 ElementGauge Class Reference

Inheritance diagram for ElementGauge:



Public Member Functions

- override void **_Ready** ()
- void UpdateGauge (Element element, int value)
  Function to update the gauge of a specific element.

5.6.1 Member Function Documentation

5.6.1.1 UpdateGauge()

```
void ElementGauge.UpdateGauge (
            Element element,
            int value)
```

Function to update the gauge of a specific element.

Parameters

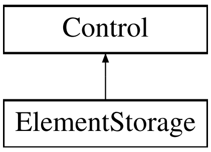
element	The element that should be updated
value	The new value it should have

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

- UI/ElementGauge.cs

5.7 ElementStorage Class Reference

Inheritance diagram for ElementStorage:



Public Member Functions

- override void **_Ready** ()
- void ToggleElementPanelColor (ClassesAndEnums.Element element, bool setColor)

  Sets the colours of the element panels to the default colour.
- void StoreSpellColor (Element chosenElement)

  The function to store the color of the spell in the queue.
- override void _Input (InputEvent @event)

  Event handler for when the rotate button is pressed.
- Element GetFirstRealmElement ()

  Gets the first element in the queue.
- ColorRect CastFirstElementInStorage ()

  Return to cast the first element in the queue.
- override void **_Process** (float delta)

5.7.1 Member Function Documentation

5.7.1.1 _Input()

```
override void ElementStorage._Input (
             InputEvent @ event)
```

Event handler for when the rotate button is pressed.

Parameters

event	The event that needs to be handled

5.7.1.2 CastFirstElementInStorage()

```
ColorRect ElementStorage.CastFirstElementInStorage ()
```

Return to cast the first element in the queue.

Returns

ColorRext of the Element that got cast

5.7.1.3 GetFirstRealmElement()

```
Element ElementStorage.GetFirstRealmElement ()
```

Gets the first element in the queue.

Returns

Returns the first element of the queue

5.7.1.4 StoreSpellColor()

```
void ElementStorage.StoreSpellColor (
             Element chosenElement)
```

The function to store the color of the spell in the queue.

Parameters

chosenElement	Element that should be set

5.7.1.5 ToggleElementPanelColor()

```
void ElementStorage.ToggleElementPanelColor (
             ClassesAndEnums.Element element,
             bool setColor)
```

Sets the colours of the element panels to the default colour.

Parameters

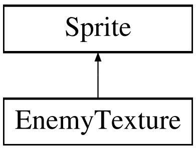
element	The element that needs to be set
setColor	Bool if the color should be set

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

- UI/ElementStorage.cs

5.8 EnemyTexture Class Reference

Inheritance diagram for EnemyTexture:



Public Member Functions

- override void **_Ready** ()
- void SetEnemyTexture (Element element)

  Setter for the Enemy Texture.

5.8.1 Member Function Documentation

5.8.1.1 SetEnemyTexture()

```
void EnemyTexture.SetEnemyTexture (
            Element element)
```

Setter for the Enemy Texture.

Parameters

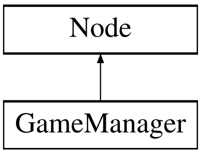
element	The element of the enemy

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

- enemy/EnemyTexture.cs

5.9 GameManager Class Reference

Inheritance diagram for GameManager:



Public Member Functions

- override void **_Ready** ()
- void SetScore (int score)

  Set the score of the player.
- int GetScore ()

  Gets the current score of the player.
- override void **_EnterTree** ()

Properties

- static GameManager **Instance** `[get]`
- List< Element > **AlowedBasicElements** `[get, set]`

  Getter and Setter for the allowed basic elements.

5.9.1 Member Function Documentation

5.9.1.1 GetScore()

```
int GameManager.GetScore ()
```

Gets the current score of the player.

Returns

Integer that is the score of the player

5.9.1.2 SetScore()

```
void GameManager.SetScore (
             int score)
```

Set the score of the player.

Parameters

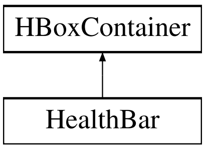
score	The score that should be set

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

- manager/GameManager.cs

5.10 HealthBar Class Reference

Inheritance diagram for HealthBar:



Public Member Functions

- override void **_Ready** ()
- void UpdateHealthBar (int currentHP)

  Updates the health bar with the current HP value.

5.10.1 Member Function Documentation

5.10.1.1 UpdateHealthBar()

```
void HealthBar.UpdateHealthBar (
             int currentHP)
```

Updates the health bar with the current HP value.

Parameters

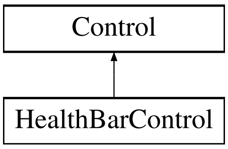
currentHP	The new health value of the player

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

- UI/HealthBar.cs

5.11 HealthBarControl Class Reference

Inheritance diagram for HealthBarControl:



Public Member Functions

- override void **_Ready** ()

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

- enemy/HealthBarControl.cs

5.12 Highscore Class Reference

Public Member Functions

- **Highscore** (string name, int score)

Public Attributes

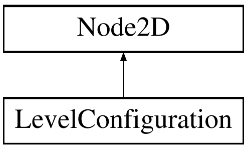
- string **Name**
- int **Score**

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

- JsonClasses/Highscore.cs

5.13 LevelConfiguration Class Reference

Inheritance diagram for LevelConfiguration:



Public Member Functions

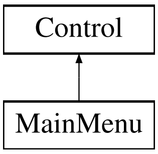
- override void **_Ready** ()
- override void **_Process** (float delta)

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

- level/LevelConfiguration.cs

5.14 MainMenu Class Reference

Inheritance diagram for MainMenu:

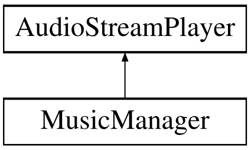


The documentation for this class was generated from the following file:

- UI/MainMenu.cs

5.15 MusicManager Class Reference

Inheritance diagram for MusicManager:



Public Member Functions

- override void _Ready ()
- void **SetVolume** (float db)

  Changes Music Volume in decibels. Optimal range seems to be -80db to -10db.
- void ChangeStream (string path)

  Plays the music at the given path.

Properties

- static MusicManager **Instance** `[get]`

5.15.1 Member Function Documentation

5.15.1.1 _Ready()

```
override void MusicManager._Ready ()
```

Creates Singleton Instance and Starts the MainMenu song

5.15.1.2 ChangeStream()

```
void MusicManager.ChangeStream (
             string path)
```

Plays the music at the given path.

Parameters

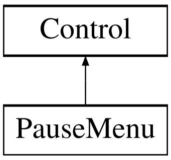
path	The path to the music file

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

- manager/MusicManager.cs

5.16 PauseMenu Class Reference

Inheritance diagram for PauseMenu:



Public Member Functions

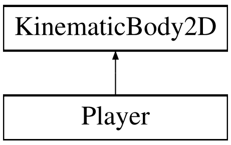
- override void **_Ready** ()
- override void **_Input** (InputEvent @event)

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

- UI/PauseMenu.cs

5.17 Player Class Reference

Inheritance diagram for Player:



Public Member Functions

- override void **_Ready** ()
- override void **_Process** (float delta)
- void TakeDamage (int dmgAmount, Vector2 damageVector)

  Function to take damage from the enemy.

5.17.1 Member Function Documentation

5.17.1.1 TakeDamage()

```
void Player.TakeDamage (
             int dmgAmount,
             Vector2 damageVector)
```

Function to take damage from the enemy.

Parameters

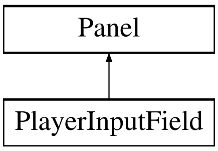
dmgAmount	Amount of damage that should be taken
damageVector	The vector from where the damage is taken from for knockback

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

- player/Player.cs

5.18 PlayerInputField Class Reference

Inheritance diagram for PlayerInputField:



Public Member Functions

- override void **_Ready** ()
- void AddTextToLabel (string text)

  Adds text to the label.
- void **ResetLabelText** ()

  Resets the Label Text.

5.18.1 Member Function Documentation

5.18.1.1 AddTextToLabel()

```
void PlayerInputField.AddTextToLabel (
            string text)
```

Adds text to the label.

Parameters

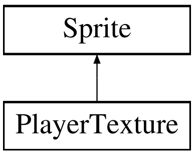
text	The text that should be added to the label

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

- UI/PlayerInputField.cs

5.19 PlayerTexture Class Reference

Inheritance diagram for PlayerTexture:



Public Member Functions

- override void **_Ready** ()
- void SetPlayerTexture (double hp, int maxHp)

  Sets the player texture based on the current health of the player.

5.19.1 Member Function Documentation

5.19.1.1 SetPlayerTexture()

```
void PlayerTexture.SetPlayerTexture (
             double hp,
             int maxHp)
```

Sets the player texture based on the current health of the player.

Parameters

hp	The health of the player
maxHp	The maximum amount of health of the player

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

- player/PlayerTexture.cs

5.20 ClassesAndEnums.SpawnPosition Class Reference

Public Attributes

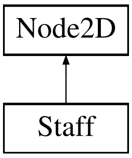
- Godot.Vector2 **Vector**
- bool **Valid** = false

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

- manager/ClassesAndEnums.cs

5.21 Staff Class Reference

Inheritance diagram for Staff:



Public Member Functions

- override void **_Ready** ()
- override void _Input (InputEvent @event)

  Event based Input function for the player.
- override void **_Process** (float delta)

5.21.1 Member Function Documentation

5.21.1.1 _Input()

```
override void Staff._Input (
            InputEvent @ event)
```

Event based Input function for the player.

Parameters

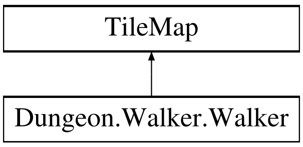
event	Input Event from the player

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

- player/Staff.cs

5.22 Dungeon.Walker.Walker Class Reference

Inheritance diagram for Dungeon.Walker.Walker:



Public Member Functions

- Walker (Godot.Vector2 startingPosition, Godot.Rect2 new_borders)

  A walker that walks in a 2D space.
- List< Godot.Vector2 > walk (int steps)

  A method that makes the walker walk in a 2D space.
- bool step ()

  One step of the walker.
- void **change_direction** ()

  Changes the direction the walker walks to.

Static Public Member Functions

- static void Shuffle< T > (List< T > list)

  Helper Method to shuffle a list.

5.22.1 Constructor & Destructor Documentation

5.22.1.1 Walker()

```
Dungeon.Walker.Walker.Walker (
             Godot.Vector2 startingPosition,
             Godot.Rect2 new_borders)
```

A walker that walks in a 2D space.

Parameters

startingPosition	The starting position of the Walker
new_borders	The border of the Map

5.22.2 Member Function Documentation

5.22.2.1 Shuffle< T >()

```
static void Dungeon.Walker.Walker.Shuffle< T > (
             List< T > list)  [static]
```

Helper Method to shuffle a list.

Parameters

list	the list that has to be shuffled

Template Parameters

T	

5.22.2.2 step()

```
bool Dungeon.Walker.Walker.step ()
```

One step of the walker.

Returns

A boolean if the step was taken

5.22.2.3 walk()

```
List< Godot.Vector2 > Dungeon.Walker.Walker.walk (
             int steps)
```

A method that makes the walker walk in a 2D space.

Parameters

steps	The amount of steps the walker should take

Returns

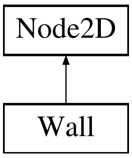
stepHistory is a list of Steps the walker has taken

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

- Dungeon/Walker.cs

5.23 Wall Class Reference

Inheritance diagram for Wall:



Public Member Functions

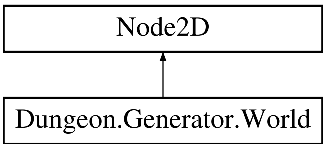
- override void **_Ready** ()
- void **_OnWallCollided** (Node body)

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

- devTesting/sceneAssets/Wall.cs

5.24 Dungeon.Generator.World Class Reference

Inheritance diagram for Dungeon.Generator.World:



Public Member Functions

- override void **_Ready** ()
- void **generate_level** ()

  Lets the walker generate a level.
- bool GetStatus ()

  Getters for the status of the generation.

5.24.1 Member Function Documentation

5.24.1.1 GetStatus()

```
bool Dungeon.Generator.World.GetStatus ()
```

Getters for the status of the generation.

Returns

boolean if the generation is done

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

- Dungeon/World.cs

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