

Namespace ElectricDrill

Structs

[StatChangeInfo](#)

Struct StatChangeInfo

Namespace: [ElectricDrill](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public struct StatChangeInfo
```

Constructors

StatChangeInfo(EntityStats, Stat, long, long)

```
public StatChangeInfo(EntityStats entity, Stat stat, long oldValue, long newValue)
```

Parameters

entity [EntityStats](#)

stat [Stat](#)

oldValue long

newValue long

Fields

EntityStats

```
public EntityStats EntityStats
```

Field Value

[EntityStats](#)

NewValue

```
public long NewValue
```

Field Value

long

OldValue

```
public long OldValue
```

Field Value

long

Stat

```
public Stat Stat
```

Field Value

Stat

Namespace ElectricDrill.SimpleRPGCore.SimpleRpgCore.Utils

Classes

[Cache<KType, VType>](#)

A generic cache class that provides basic caching functionality.

Class Cache<KType, VType>

Namespace: [ElectricDrill.SimpleRPGCore.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

A generic cache class that provides basic caching functionality.

```
public class Cache<KType, VType>
```

Type Parameters

KType

The type of the keys in the cache.

VType

The type of the values in the cache.

Inheritance

object ← Cache<KType, VType>

Properties

this[KType]

Gets or sets the value for the specified key in the cache.

```
public VType this[KType key] { get; set; }
```

Parameters

key KType

The key of the item to get or set.

Property Value

VType

The value associated with the specified key.

Methods

Get(KType)

Gets the value for the specified key from the cache. If the key is not found, a KeyNotFoundException is thrown.

```
public VType Get(KType key)
```

Parameters

key KType

The key of the item to get.

Returns

VType

The value associated with the specified key.

Exceptions

KeyNotFoundException

Thrown when the key is not found in the cache.

Has(KType)

Determines whether the cache contains an item with the specified key.

```
public bool Has(KType key)
```

Parameters

key KType

The key to locate in the cache.

Returns

bool

true if the cache contains an item with the key; otherwise, false.

Invalidate(KType)

Invalidates the cache item for the specified key. If key is not found, nothing happens.

```
public void Invalidate(KType key)
```

Parameters

key KType

The key of the item to invalidate.

InvalidateAll()

Invalidates all items in the cache.

```
public void InvalidateAll()
```

Set(KType, VType)

Sets the value for the specified key in the cache. UPSERT operation.

```
public void Set(KType key, VType value)
```

Parameters

key KType

The key of the item to set.

value VType

The value to set for the specified key.

TryGet(KType, out VType)

Tries to get the value for the specified key from the cache.

```
public bool TryGet(KType key, out VType value)
```

Parameters

key KType

The key of the item to get.

value VType

When this method returns, contains the value associated with the specified key, if the key is found; otherwise, the default value for the type of the value parameter.

Returns

bool

true if the cache contains an item with the specified key; otherwise, false.

Namespace ElectricDrill.SimpleRpgCore

Classes

[BoundedValue](#)

[Class](#)

[EntityClass](#)

[EntityCore](#)

[EntityLevel](#)

[ExpSource](#)

[GrowthFormula](#)

Interfaces

[IAttributes](#)

[IClassSource](#)

[IExpSource](#)

[ILevel](#)

[ILevelable](#)

[IStatSet](#)

Class BoundedValue

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class BoundedValue : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← BoundedValue

Derived

[Attribute](#), [Stat](#)

Properties

Has.MaxValue

```
public bool Has.MaxValue { get; }
```

Property Value

bool

Has.MinValue

```
public bool Has.MinValue { get; }
```

Property Value

bool

MaxValue

```
public long MaxValue { get; }
```

Property Value

long

MinValue

```
public int MinValue { get; }
```

Property Value

int

Class Class

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Class", menuName = "Simple RPG Core/Class")]
public class Class : ScriptableObject, IStatSet
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← Class

Implements

[IStatSet](#)

Fields

_maxHpGrowthFormula

```
[SerializeField]
protected GrowthFormula _maxHpGrowthFormula
```

Field Value

[GrowthFormula](#)

_statSet

```
[SerializeField]
protected StatSet _statSet
```

Field Value

[StatSet](#)

attributeSet

```
[SerializeField]  
protected AttributeSet attributeSet
```

Field Value

[AttributeSet](#)

Properties

AttributeSet

```
public AttributeSet AttributeSet { get; }
```

Property Value

[AttributeSet](#)

StatSet

```
public virtual StatSet StatSet { get; }
```

Property Value

[StatSet](#)

Methods

GetAttributeAt(Attribute, int)

```
public long GetAttributeAt(Attribute attribute, int level)
```

Parameters

attribute [Attribute](#)

level int

Returns

long

GetMaxHpAt(int)

```
public long GetMaxHpAt(int level)
```

Parameters

level int

Returns

long

GetStatAt(Stat, int)

```
public virtual long GetStatAt(Stat stat, int level)
```

Parameters

stat [Stat](#)

level int

Returns

long

Class EntityClass

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class EntityClass : MonoBehaviour, IClassSource
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← EntityClass

Implements

[IClassSource](#)

Properties

Class

```
public Class Class { get; }
```

Property Value

[Class](#)

Operators

implicit operator Class(EntityClass)

```
public static implicit operator Class(EntityClass entityClass)
```

Parameters

entityClass [EntityClass](#)

Returns

Class EntityCore

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class EntityCore : MonoBehaviour, ILevel, IAttributes
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← EntityCore

Implements

[ILevel](#), [IAttributes](#)

Properties

Attributes

```
public virtual EntityAttributes Attributes { get; }
```

Property Value

[EntityAttributes](#)

Level

```
public virtual EntityLevel Level { get; }
```

Property Value

[EntityLevel](#)

Stats

```
public virtual EntityStats Stats { get; }
```

Property Value

[EntityStats](#)

Methods

Awake()

```
protected virtual void Awake()
```

Start()

```
protected virtual void Start()
```

Update()

```
protected virtual void Update()
```

Class EntityLevel

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class EntityLevel : ILevelable
```

Inheritance

object ← EntityLevel

Implements

[ILevelable](#)

Properties

CurrentTotalExperience

```
public long CurrentTotalExperience { get; }
```

Property Value

long

Level

```
public virtual int Level { get; set; }
```

Property Value

int

OnLevelUp

```
public Action<int> OnLevelUp { get; set; }
```

Property Value

Action<int>

Methods

AddExp(long)

```
public void AddExp(long amount)
```

Parameters

amount long

CurrentLevelTotalExperience()

```
public long CurrentLevelTotalExperience()
```

Returns

long

NextLevelTotalExperience()

```
public long NextLevelTotalExperience()
```

Returns

long

SetTotalCurrentExp(long)

```
public void SetTotalCurrentExp(long totalCurrentExperience)
```

Parameters

totalCurrentExperience long

ValidateExperience()

```
public void ValidateExperience()
```

Operators

implicit operator int(EntityLevel)

```
public static implicit operator int(EntityLevel entityLevel)
```

Parameters

entityLevel [EntityLevel](#)

Returns

int

Class ExpSource

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class ExpSource : MonoBehaviour, IExpSource
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← ExpSource

Implements

[IExpSource](#)

Properties

Exp

```
public long Exp { get; }
```

Property Value

long

Harvested

```
public bool Harvested { get; set; }
```

Property Value

bool

Class GrowthFormula

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Growth Formula", menuName = "Simple RPG  
Core/Growth Formula")]  
public class GrowthFormula : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GrowthFormula

Properties

GrowthFoValues

```
public double[] GrowthFoValues { get; }
```

Property Value

double[]

Methods

GetGrowthValue(int)

```
public long GetGrowthValue(int level)
```

Parameters

level int

Returns

long

Interface IAttributes

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IAttributes
```

Properties

Attributes

```
EntityAttributes Attributes { get; }
```

Property Value

[EntityAttributes](#)

Interface IClassSource

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IClassSource
```

Properties

Class

```
Class Class { get; }
```

Property Value

[Class](#)

Interface IExpSource

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IExpSource
```

Properties

Exp

```
long Exp { get; }
```

Property Value

long

Harvested

```
bool Harvested { get; set; }
```

Property Value

bool

Interface ILevel

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface ILevel
```

Properties

Level

```
EntityLevel Level { get; }
```

Property Value

[EntityLevel](#)

Interface ILevelable

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface ILevelable
```

Properties

CurrentTotalExperience

```
long CurrentTotalExperience { get; }
```

Property Value

long

Level

```
int Level { get; set; }
```

Property Value

int

Methods

AddExp(long)

```
void AddExp(long amount)
```

Parameters

amount long

CurrentLevelTotalExperience()

long CurrentLevelTotalExperience()

Returns

long

NextLevelTotalExperience()

long NextLevelTotalExperience()

Returns

long

SetTotalCurrentExp(long)

void SetTotalCurrentExp(long totalCurrentExperience)

Parameters

totalCurrentExperience long

ValidateExperience()

void ValidateExperience()

Interface IStatSet

Namespace: [ElectricDrill.SimpleRpgCore](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IStatSet
```

Properties

StatSet

```
StatSet StatSet { get; }
```

Property Value

[StatSet](#)

Namespace ElectricDrill.SimpleRpgCore. Attributes

Classes

[Attribute](#)

[AttributePointsTracker](#)

[AttributeSet](#)

[AttributeSetInstance](#)

[AttributeSetInstanceExtensions](#)

[EntityAttributes](#)

Interfaces

[IAttributeContainer](#)

Class Attribute

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Attribute", menuName = "Simple RPG Core/Attribute")]
[Serializable]
public class Attribute : BoundedValue
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [BoundedValue](#) ← Attribute

Inherited Members

[BoundedValue.HasValue](#) , [BoundedValue.MaxValue](#) , [BoundedValue.HasMinValue](#) ,
[BoundedValue.MinValue](#)

Class AttributePointsTracker

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class AttributePointsTracker
```

Inheritance

object ← AttributePointsTracker

Properties

Available

```
public int Available { get; }
```

Property Value

int

SpentAttributesKeys

```
public Dictionary<Attribute, int>.KeyCollection SpentAttributesKeys { get; }
```

Property Value

Dictionary<[Attribute](#), int>.KeyCollection

Methods

AddPoints(int)

```
public void AddPoints(int amount)
```

Parameters

amount int

GetSpentOn(Attribute)

```
public long GetSpentOn(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

long

Refund(Attribute)

```
public void Refund(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Refund(Attribute, int)

```
public void Refund(Attribute attribute, int amount)
```

Parameters

attribute [Attribute](#)

amount int

RefundAll()

```
public void RefundAll()
```

SpendOn(Attribute, int)

```
public void SpendOn(Attribute attribute, int amount)
```

Parameters

attribute [Attribute](#)

amount int

Class AttributeSet

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Attribute Set", menuName = "Simple RPG  
Core/Attribute Set")]  
public class AttributeSet : ScriptableObject, IAttributeContainer
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← AttributeSet

Implements

[IAttributeContainer](#)

Properties

Attributes

```
public IReadOnlyList<Attribute> Attributes { get; }
```

Property Value

IReadOnlyList<[Attribute](#)>

Methods

Contains(Attribute)

```
public bool Contains(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

bool

Get(Attribute)

```
public Attribute Get(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

[Attribute](#)

Class AttributeSetInstance

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class AttributeSetInstance : IAttributeContainer
```

Inheritance

object ← AttributeSetInstance

Implements

[IAttributeContainer](#)

Constructors

AttributeSetInstance(AttributeSet)

```
public AttributeSetInstance(AttributeSet attrSet)
```

Parameters

attrSet [AttributeSet](#)

Properties

Attributes

```
public Dictionary<Attribute, long> Attributes { get; }
```

Property Value

Dictionary<[Attribute](#), long>

this[Attribute]

```
public long this[Attribute attribute] { get; set; }
```

Parameters

attribute [Attribute](#)

Property Value

long

Methods

AddValue(Attribute, long)

```
public void AddValue(Attribute attribute, long value)
```

Parameters

attribute [Attribute](#)

value long

Clone()

```
public AttributeSetInstance Clone()
```

Returns

[AttributeSetInstance](#)

Contains(Attribute)

```
public bool Contains(Attribute stat)
```

Parameters

stat [Attribute](#)

Returns

bool

Get(Attribute)

```
public long Get(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

long

GetAsPercentage(Attribute)

```
public Percentage GetAsPercentage(Attribute stat)
```

Parameters

stat [Attribute](#)

Returns

[Percentage](#)

GetEnumerator()

```
public IEnumarator<KeyValuePair<Attribute, long>> GetEnumerator()
```

Returns

IEnumerator<KeyValuePair<[Attribute](#), long>>

Operators

operator +(AttributeSetInstance, AttributeSetInstance)

```
public static AttributeSetInstance operator +(AttributeSetInstance a,  
AttributeSetInstance b)
```

Parameters

a [AttributeSetInstance](#)

b [AttributeSetInstance](#)

Returns

[AttributeSetInstance](#)

explicit operator

AttributeSetInstance(SerializableDictionary<Attribute, long>)

```
public static explicit operator AttributeSetInstance(SerializableDictionary<Attribute,  
long> dictionary)
```

Parameters

dictionary [SerializableDictionary<Attribute, long>](#)

Returns

[AttributeSetInstance](#)

Class AttributeSetInstanceExtensions

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public static class AttributeSetInstanceExtensions
```

Inheritance

object ← AttributeSetInstanceExtensions

Methods

ToAttributeSetInstance(SerializableDictionary<Attribute, long>, AttributeSet)

```
public static AttributeSetInstance ToAttributeSetInstance(this  
SerializableDictionary<Attribute, long> dictionary, AttributeSet attributeSet)
```

Parameters

dictionary [SerializableDictionary<Attribute, long>](#)

attributeSet [AttributeSet](#)

Returns

[AttributeSetInstance](#)

Class EntityAttributes

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[RequireComponent(typeof(EntityCore))]  
public class EntityAttributes : MonoBehaviour
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← EntityAttributes

Properties

AttrPointsTracker

```
public AttributePointsTracker AttrPointsTracker { get; }
```

Property Value

[AttributePointsTracker](#)

AttributeSet

```
public AttributeSet AttributeSet { get; }
```

Property Value

[AttributeSet](#)

AttributesCache

```
public Cache<Attribute, long> AttributesCache { get; }
```

Property Value

[Cache<Attribute, long>](#)

FlatModifiers

```
protected AttributeSetInstance FlatModifiers { get; }
```

Property Value

[AttributeSetInstance](#)

PercentageModifiers

```
protected AttributeSetInstance PercentageModifiers { get; }
```

Property Value

[AttributeSetInstance](#)

Methods

AddFlatModifier(Attribute, long)

```
public void AddFlatModifier(Attribute attribute, long value)
```

Parameters

attribute [Attribute](#)

value long

AddPercentageModifier(Attribute, Percentage)

```
public void AddPercentageModifier(Attribute attribute, Percentage value)
```

Parameters

attribute [Attribute](#)

value [Percentage](#)

Get(Attribute)

```
public long Get(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

long

GetBase(Attribute)

```
public long GetBase(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

long

Interface IAttributeContainer

Namespace: [ElectricDrill.SimpleRpgCore.Attributes](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IAttributeContainer
```

Methods

Contains(Attribute)

```
bool Contains(Attribute attribute)
```

Parameters

attribute [Attribute](#)

Returns

bool

Namespace ElectricDrill.SimpleRpgCore.Events

Classes

[EntityCoreGameEvent](#)

[EntityCoreGameEventListener](#)

[GameEvent](#)

[GameEventGenerator](#)

[GameEventGenerator.EventParameter](#)

[GameEventGenerator.GameEventDefinition](#)

[GameEventGeneric1<T>](#)

[GameEventGeneric2<T, U>](#)

[GameEventGeneric3<T, U, W>](#)

[GameEventGeneric4<T, U, W, K>](#)

[GameEventListener](#)

[GameEventListenerGeneric1<T>](#)

[GameEventListenerGeneric2<T, U>](#)

[GameEventListenerGeneric3<T, U, W>](#)

[GameEventListenerGeneric4<T, U, W, K>](#)

[IntGameEvent](#)

[IntGameEventListener](#)

[StatChangedGameEvent](#)

The stat that changed, the stat's previous value, and the stat's new value

[StatChangedGameEventListener](#)

The stat that changed, the stat's previous value, and the stat's new value

Interfaces

[IRaisable<T>](#)

[IRaisable<T, U>](#)

[IRaisable<T, U, V>](#)

[IRaisable<T, U, V, W>](#)

Enums

[GameEventGenerator.EventParameter.NativeType](#)

[GameEventGenerator.EventParameter.ParameterType](#)

Class EntityCoreGameEvent

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "EntityCore Game Event", menuName = "Simple RPG
Core/Events/Generated/EntityCore")]
public class EntityCoreGameEvent : GameEventGeneric1<EntityCore>, IRaisable<EntityCore>
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [GameEventGeneric1<EntityCore>](#) ← EntityCoreGameEvent

Implements

[IRaisable<EntityCore>](#)

Inherited Members

[GameEventGeneric1<EntityCore>.OnEventRaised](#) , [GameEventGeneric1<EntityCore>.Raise\(EntityCore\)](#) ,
[GameEventGeneric1<EntityCore>.RegisterListener\(GameEventListenerGeneric1<EntityCore>\)](#) ,
[GameEventGeneric1<EntityCore>.UnregisterListener\(GameEventListenerGeneric1<EntityCore>\)](#).

Class EntityCoreGameEventListener

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class EntityCoreGameEventListener : GameEventListenerGeneric1<EntityCore>
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ←
[GameEventListenerGeneric1<EntityCore>](#) ← EntityCoreGameEventListener

Inherited Members

[GameEventListenerGeneric1<EntityCore>.event](#) , [GameEventListenerGeneric1<EntityCore>.response](#) ,
[GameEventListenerGeneric1<EntityCore>.OnEventRaised\(EntityCore\)](#).

Class GameEvent

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Game Event", menuName = "Simple RPG  
Core/Events/Game Event")]  
public class GameEvent : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEvent

Methods

Raise()

```
public void Raise()
```

RegisterListener(GameEventListener)

```
public void RegisterListener(GameEventListener listener)
```

Parameters

listener [GameEventListener](#)

UnregisterListener(GameEventListener)

```
public void UnregisterListener(GameEventListener listener)
```

Parameters

listener [GameEventListener](#)

Class GameEventGenerator

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "GameEventGenerator", menuName = "Simple RPG  
Core/Tools/GameEventGenerator")]  
public sealed class GameEventGenerator : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEventGenerator

Fields

baseSaveLocation

```
public string baseSaveLocation
```

Field Value

string

eventsToGenerate

```
public List<GameEventGenerator.GameEventDefinition> eventsToGenerate
```

Field Value

List<[GameEventGenerator.GameEventDefinition](#)>

menubasePath

```
public string menubasePath
```

Field Value

string

rootNamespace

```
public string rootNamespace
```

Field Value

string

Methods

GenerateGameEvents()

```
public void GenerateGameEvents()
```

RemoveGeneratedEventFiles(string, int)

```
public void RemoveGeneratedEventFiles(string eventName, int parameterCount)
```

Parameters

eventName string

parameterCount int

Class GameEventGenerator.EventParameter

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class GameEventGenerator.EventParameter
```

Inheritance

object ← GameEventGenerator.EventParameter

Fields

monoScript

```
public MonoScript monoScript
```

Field Value

MonoScript

nativeType

```
public GameEventGenerator.EventParameter.NativeType nativeType
```

Field Value

[GameEventGenerator.EventParameter.NativeType](#)

parameterType

```
public GameEventGenerator.EventParameter.ParameterType parameterType
```

Field Value

[GameEventGenerator.EventParameter.ParameterType](#)

Enum GameEventGenerator.EventParameter.NativeType

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public enum GameEventGenerator.EventParameter.NativeType
```

Fields

bool = 3

float = 2

int = 0

long = 1

Enum GameEventGenerator.EventParameter.ParameterType

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public enum GameEventGenerator.EventParameter.ParameterType
```

Fields

MonoScript = 1

Native = 0

Class

GameEventGenerator.GameEventDefinition

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class GameEventGenerator.GameEventDefinition
```

Inheritance

object ← GameEventGenerator.GameEventDefinition

Fields

documentation

```
[HideInInspector]
public string documentation
```

Field Value

string

eventName

```
public string eventName
```

Field Value

string

isGenerated

```
[HideInInspector]  
public bool isGenerated
```

Field Value

bool

parameters

```
public List<GameEventGenerator.EventParameter> parameters
```

Field Value

List<[GameEventGenerator.EventParameter](#)>

Class GameEventGeneric1<T>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class GameEventGeneric1<T> : ScriptableObject, IRaisable<T>
```

Type Parameters

T

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEventGeneric1<T>

Implements

[IRaisable](#)<T>

Derived

[EntityCoreGameEvent](#), [IntGameEvent](#), [StatChangedGameEvent](#)

Methods

Raise(T)

```
public void Raise(T context)
```

Parameters

context T

RegisterListener(GameEventListenerGeneric1<T>)

```
public void RegisterListener(GameEventListenerGeneric1<T> listener)
```

Parameters

listener [GameEventListenerGeneric1](#)<T>

UnregisterListener(GameEventListenerGeneric1<T>)

```
public void UnregisterListener(GameEventListenerGeneric1<T> listener)
```

Parameters

listener [GameEventListenerGeneric1](#)<T>

Events

OnEventRaised

```
public event Action<T> OnEventRaised
```

Event Type

Action<T>

Class GameEventGeneric2<T, U>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class GameEventGeneric2<T, U> : ScriptableObject, IRaisable<T, U>
```

Type Parameters

T

U

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEventGeneric2<T, U>

Implements

[IRaisable](#)<T, U>

Methods

Raise(T, U)

```
public void Raise(T context1, U context2)
```

Parameters

context1 T

context2 U

RegisterListener(GameEventListenerGeneric2<T, U>)

```
public void RegisterListener(GameEventListenerGeneric2<T, U> listener)
```

Parameters

listener [GameEventListenerGeneric2](#)<T, U>

UnregisterListener(GameEventListenerGeneric2<T, U>)

```
public void UnregisterListener(GameEventListenerGeneric2<T, U> listener)
```

Parameters

listener [GameEventListenerGeneric2](#)<T, U>

Events

OnEventRaised

```
public event Action<T, U> OnEventRaised
```

Event Type

Action<T, U>

Class GameEventGeneric3<T, U, W>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class GameEventGeneric3<T, U, W> : ScriptableObject, IRaisable<T, U, W>
```

Type Parameters

T

U

W

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEventGeneric3<T, U, W>

Implements

[IRaisable](#)<T, U, W>

Methods

Raise(T, U, W)

```
public void Raise(T contextT, U contextU, W contextW)
```

Parameters

contextT T

contextU U

contextW W

RegisterListener(GameEventListenerGeneric3<T, U, W>)

```
public void RegisterListener(GameEventListenerGeneric3<T, U, W> listener)
```

Parameters

listener [GameEventListenerGeneric3](#)<T, U, W>

UnregisterListener(GameEventListenerGeneric3<T, U, W>)

```
public void UnregisterListener(GameEventListenerGeneric3<T, U, W> listener)
```

Parameters

listener [GameEventListenerGeneric3](#)<T, U, W>

Events

OnEventRaised

```
public event Action<T, U, W> OnEventRaised
```

Event Type

Action<T, U, W>

Class GameEventGeneric4<T, U, W, K>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class GameEventGeneric4<T, U, W, K> : ScriptableObject, IRaisable<T, U, W, K>
```

Type Parameters

T

U

W

K

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← GameEventGeneric4<T, U, W, K>

Implements

[IRaisable](#)<T, U, W, K>

Methods

Raise(T, U, W, K)

```
public void Raise(T contextT, U contextU, W contextW, K contextK)
```

Parameters

contextT T

contextU U

contextW W

contextK K

RegisterListener(GameEventListenerGeneric4<T, U, W, K>)

```
public void RegisterListener(GameEventListenerGeneric4<T, U, W, K> listener)
```

Parameters

listener [GameEventListenerGeneric4<T, U, W, K>](#)

UnregisterListener(GameEventListenerGeneric4<T, U, W, K>)

```
public void UnregisterListener(GameEventListenerGeneric4<T, U, W, K> listener)
```

Parameters

listener [GameEventListenerGeneric4<T, U, W, K>](#)

Events

OnEventRaised

```
public event Action<T, U, W, K> OnEventRaised
```

Event Type

Action<T, U, W, K>

Class GameEventListener

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class GameEventListener : MonoBehaviour
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← GameEventListener

Methods

OnEventRaised()

```
public void OnEventRaised()
```

Class GameEventListenerGeneric1<T>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class GameEventListenerGeneric1<T> : MonoBehaviour
```

Type Parameters

T

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← GameEventListenerGeneric1<T>

Derived

[EntityCoreGameEventListener](#), [IntGameEventListener](#), [StatChangedGameEventListener](#)

Fields

_event

```
[SerializeField]  
protected GameEventGeneric1<T> _event
```

Field Value

[GameEventGeneric1<T>](#)

_response

```
[SerializeField]  
protected UnityEvent<T> _response
```

Field Value

[UnityEvent<T>](#)

Methods

OnEventRaised(T)

```
public void OnEventRaised(T context)
```

Parameters

context T

Class GameEventListenerGeneric2<T, U>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class GameEventListenerGeneric2<T, U> : MonoBehaviour
```

Type Parameters

T

U

Inheritance

```
object < Object < Component < Behaviour < MonoBehaviour <
GameEventListenerGeneric2<T, U>
```

Fields

_event

```
[SerializeField]
protected GameEventGeneric2<T, U> _event
```

Field Value

[GameEventGeneric2<T, U>](#)

_response

```
[SerializeField]
protected UnityEvent<T, U> _response
```

Field Value

[UnityEvent<T, U>](#)

Methods

OnEventRaised(T, U)

```
public void OnEventRaised(T contextT, U contextU)
```

Parameters

contextT T

contextU U

Class GameEventListenerGeneric3<T, U, W>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class GameEventListenerGeneric3<T, U, W> : MonoBehaviour
```

Type Parameters

T

U

W

Inheritance

```
object < Object < Component < Behaviour < MonoBehaviour <
GameEventListenerGeneric3<T, U, W>
```

Fields

_event

```
[SerializeField]
protected GameEventGeneric3<T, U, W> _event
```

Field Value

[GameEventGeneric3<T, U, W>](#)

_response

```
[SerializeField]
protected UnityEvent<T, U, W> _response
```

Field Value

Methods

OnEventRaised(T, U, W)

```
public void OnEventRaised(T contextT, U contextU, W contextW)
```

Parameters

contextT T

contextU U

contextW W

Class GameEventListenerGeneric4<T, U, W, K>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class GameEventListenerGeneric4<T, U, W, K> : MonoBehaviour
```

Type Parameters

T

U

W

K

Inheritance

```
object ← Object ← Component ← Behaviour ← MonoBehaviour ←  
GameEventListenerGeneric4<T, U, W, K>
```

Fields

_event

```
[SerializeField]  
protected GameEventGeneric4<T, U, W, K> _event
```

Field Value

[GameEventGeneric4<T, U, W, K>](#)

_response

```
[SerializeField]  
protected UnityEvent<T, U, W, K> _response
```

Field Value

UnityEvent<T, U, W, K>

Methods

OnEventRaised(T, U, W, K)

```
public void OnEventRaised(T contextT, U contextU, W contextW, K contextK)
```

Parameters

contextT T

contextU U

contextW W

contextK K

Interface IRaisable<T>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IRaisable<T>
```

Type Parameters

T

Methods

Raise(T)

```
void Raise(T context)
```

Parameters

context T

Interface IRaisable<T, U>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IRaisable<T, U>
```

Type Parameters

T

U

Methods

Raise(T, U)

```
void Raise(T context1, U context2)
```

Parameters

context1 T

context2 U

Interface IRaisable<T, U, V>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IRaisable<T, U, V>
```

Type Parameters

T

U

V

Methods

Raise(T, U, V)

```
void Raise(T context1, U context2, V context3)
```

Parameters

context1 T

context2 U

context3 V

Interface IRaisable<T, U, V, W>

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IRaisable<T, U, V, W>
```

Type Parameters

T

U

V

W

Methods

Raise(T, U, V, W)

```
void Raise(T context1, U context2, V context3, W context4)
```

Parameters

context1 T

context2 U

context3 V

context4 W

Class IntGameEvent

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "Int Game Event", menuName = "Simple
RPG Core/Events/Generated/Int")]
public class IntGameEvent : GameEventGeneric1<int>, IRaisable<int>
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [GameEventGeneric1<int>](#) ← IntGameEvent

Implements

[IRaisable<int>](#)

Inherited Members

[GameEventGeneric1<int>.OnEventRaised](#) , [GameEventGeneric1<int>.Raise\(int\)](#) ,
[GameEventGeneric1<int>.RegisterListener\(GameEventListenerGeneric1<int>\)](#) ,
[GameEventGeneric1<int>.UnregisterListener\(GameEventListenerGeneric1<int>\)](#).

Class IntGameEventListener

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class IntGameEventListener : GameEventListenerGeneric1<int>
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ←
[GameEventListenerGeneric1](#)<int> ← IntGameEventListener

Inherited Members

[GameEventListenerGeneric1<int>.event](#) , [GameEventListenerGeneric1<int>.response](#) ,
[GameEventListenerGeneric1<int>.OnEventRaised\(int\)](#)

Class StatChangedGameEvent

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

The stat that changed, the stat's previous value, and the stat's new value

```
[CreateAssetMenu(fileName = "StatChanged Game Event", menuName = "Simple RPG Core/Events/Generated/StatChanged")]
public class StatChangedGameEvent : GameEventGeneric1<StatChangeInfo>,
IRaisable<StatChangeInfo>
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [GameEventGeneric1<StatChangeInfo>](#) ← StatChangedGameEvent

Implements

[IRaisable<StatChangeInfo>](#)

Inherited Members

[GameEventGeneric1<StatChangeInfo>.OnEventRaised](#) ,
[GameEventGeneric1<StatChangeInfo>.Raise\(StatChangeInfo\)](#) ,
[GameEventGeneric1<StatChangeInfo>.RegisterListener\(GameEventListenerGeneric1<StatChangeInfo>\)](#) ,
[GameEventGeneric1<StatChangeInfo>.UnregisterListener\(GameEventListenerGeneric1<StatChangeInfo>\)](#))

Class StatChangedGameEventListener

Namespace: [ElectricDrill.SimpleRpgCore.Events](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

The stat that changed, the stat's previous value, and the stat's new value

```
public class StatChangedGameEventListener : GameEventListenerGeneric1<StatChangeInfo>
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ←
[GameEventListenerGeneric1<StatChangeInfo>](#) ← StatChangedGameEventListener

Inherited Members

[GameEventListenerGeneric1<StatChangeInfo>.event](#) ,
[GameEventListenerGeneric1<StatChangeInfo>.response](#) ,
[GameEventListenerGeneric1<StatChangeInfo>.OnEventRaised\(StatChangeInfo\)](#)

Namespace ElectricDrill.SimpleRpgCore.Scaling

Classes

[AttributesScalingComponent](#)

[ScalingComponent](#)

[ScalingFormula](#)

[SoSetScalingComponentBase<SetType, KeyType>](#)

[StatsScalingComponent](#)

Class AttributesScalingComponent

Namespace: [ElectricDrill.SimpleRpgCore.Scaling](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Attributes Scaling Component", menuName = "Simple RPG
Core/Scaling/Attributes Component")]
public class AttributesScalingComponent : SoSetScalingComponentBase<AttributeSet, Attribute>
```

Inheritance

```
object ← Object ← ScriptableObject ← ScalingComponent ←
SoSetScalingComponentBase<AttributeSet, Attribute> ← AttributesScalingComponent
```

Inherited Members

```
SoSetScalingComponentBase<AttributeSet, Attribute>.set,
SoSetScalingComponentBase<AttributeSet, Attribute>.CalculateValue(EntityCore) ,
SoSetScalingComponentBase<AttributeSet, Attribute>.GetEntitySet(EntityCore) ,
SoSetScalingComponentBase<AttributeSet, Attribute>.GetEntityValue(EntityCore, Attribute) ,
SoSetScalingComponentBase<AttributeSet, Attribute>.OnValidate() ,
SoSetScalingComponentBase<AttributeSet, Attribute>.GetSetItems() ,
ScalingComponent.CalculateValue(EntityCore)
```

Methods

GetEntitySet([EntityCore](#))

```
protected override AttributeSet GetEntitySet(EntityCore entity)
```

Parameters

entity [EntityCore](#)

Returns

[AttributeSet](#)

GetEntityValue(EntityCore, Attribute)

```
protected override long GetEntityValue(EntityCore entity, Attribute key)
```

Parameters

entity [EntityCore](#)

key [Attribute](#)

Returns

long

GetSetItems()

```
protected override IEnumerable<Attribute> GetSetItems()
```

Returns

IEnumerable<[Attribute](#)>

Class ScalingComponent

Namespace: [ElectricDrill.SimpleRpgCore.Scaling](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class ScalingComponent : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← ScalingComponent

Derived

[SoSetScalingComponentBase<SetType, KeyType>](#)

Methods

CalculateValue(EntityCore)

```
public abstract long CalculateValue(EntityCore entity)
```

Parameters

entity [EntityCore](#)

Returns

long

Class ScalingFormula

Namespace: [ElectricDrill.SimpleRpgCore.Scaling](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Scaling Formula", menuName = "Simple RPG  
Core/Scaling/Scaling Formula")]  
public class ScalingFormula : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← ScalingFormula

Properties

TmpSelfScalingComponents

```
public List<ScalingComponent> TmpSelfScalingComponents { get; }
```

Property Value

List<[ScalingComponent](#)>

TmpTargetScalingComponents

```
public List<ScalingComponent> TmpTargetScalingComponents { get; }
```

Property Value

List<[ScalingComponent](#)>

Methods

CalculateValue(EntityCore)

```
public long CalculateValue(EntityCore self)
```

Parameters

self [EntityCore](#)

Returns

long

CalculateValue(EntityCore, EntityCore)

```
public long CalculateValue(EntityCore self, EntityCore target)
```

Parameters

self [EntityCore](#)

target [EntityCore](#)

Returns

long

CalculateValue(EntityCore, EntityCore, int)

```
public long CalculateValue(EntityCore self, EntityCore target, int level)
```

Parameters

self [EntityCore](#)

target [EntityCore](#)

level int

Returns

long

CalculateValue(EntityCore, int)

```
public long CalculateValue(EntityCore self, int level)
```

Parameters

self [EntityCore](#)

level int

Returns

long

ResetTmpScalings()

```
public void ResetTmpScalings()
```

Class SoSetScalingComponentBase<SetType, KeyType>

Namespace: [ElectricDrill.SimpleRpgCore.Scaling](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public abstract class SoSetScalingComponentBase<SetType, KeyType> : ScalingComponent where
    SetType : ScriptableObject
```

Type Parameters

SetType

KeyType

Inheritance

```
object ← Object ← ScriptableObject ← ScalingComponent ←
SoSetScalingComponentBase<SetType, KeyType>
```

Derived

[AttributesScalingComponent](#), [StatsScalingComponent](#)

Fields

_set

```
[SerializeField]
protected SetType _set
```

Field Value

SetType

Methods

CalculateValue(EntityCore)

```
public override long CalculateValue(EntityCore entity)
```

Parameters

entity [EntityCore](#)

Returns

long

GetEntitySet(EntityCore)

```
protected abstract SetType GetEntitySet(EntityCore entity)
```

Parameters

entity [EntityCore](#)

Returns

SetType

GetEntityValue(EntityCore, KeyType)

```
protected abstract long GetEntityValue(EntityCore entity, KeyType key)
```

Parameters

entity [EntityCore](#)

key KeyType

Returns

long

GetSetItems()

```
protected abstract IEnumerable<KeyType> GetSetItems()
```

Returns

IEnumerable<KeyType>

OnValidate()

```
protected virtual void OnValidate()
```

Class StatsScalingComponent

Namespace: [ElectricDrill.SimpleRpgCore.Scaling](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Stats Scaling Component", menuName = "Simple RPG Core/Scaling/Stats Component")]
public class StatsScalingComponent : SoSetScalingComponentBase<StatSet, Stat>
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [ScalingComponent](#) ← [SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)> ← StatsScalingComponent

Inherited Members

[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.set ,
[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.CalculateValue([EntityCore](#)) ,
[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.GetEntitySet([EntityCore](#)) ,
[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.GetEntityValue([EntityCore](#), [Stat](#)) ,
[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.OnValidate() ,
[SoSetScalingComponentBase](#)<[StatSet](#), [Stat](#)>.GetSetItems() ,
[ScalingComponent](#).CalculateValue([EntityCore](#)) .

Methods

GetEntitySet([EntityCore](#))

```
protected override StatSet GetEntitySet(EntityCore entity)
```

Parameters

entity [EntityCore](#)

Returns

[StatSet](#)

GetEntityValue(EntityCore, Stat)

```
protected override long GetEntityValue(EntityCore entity, Stat key)
```

Parameters

entity [EntityCore](#)

key [Stat](#)

Returns

long

GetSetItems()

```
protected override IEnumerable<Stat> GetSetItems()
```

Returns

IEnumerable<[Stat](#)>

Namespace ElectricDrill.SimpleRpgCore.Stats

Classes

[EntityStats](#)

Component that manages the statistics of an entity in the game. It handles base stats, flat stat modifiers, stat to stat modifiers, and percentage stat modifiers.

Base stats can either be fixed or come from the entity's class (if one is available on the Game Object).

When stats change because of a modifier of any kind, the assigned [StatChangedGameEvent](#) is raised.

[Stat](#)

[StatSet](#)

[StatSetInstance](#)

[StatToStatModifier](#)

Interfaces

[IStatContainer](#)

Class EntityStats

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

Component that manages the statistics of an entity in the game. It handles base stats, flat stat modifiers, stat to stat modifiers, and percentage stat modifiers.

Base stats can either be fixed or come from the entity's class (if one is available on the Game Object). When stats change because of a modifier of any kind, the assigned [StatChangedGameEvent](#) is raised.

```
[RequireComponent(typeof(EntityCore))]  
public class EntityStats : MonoBehaviour, IStatSet
```

Inheritance

object ← [Object](#) ← [Component](#) ← [Behaviour](#) ← [MonoBehaviour](#) ← EntityStats

Implements

[IStatSet](#)

Fields

_entityClass

```
protected IClassSource _entityClass
```

Field Value

[IClassSource](#)

_flatModifiers

```
protected StatSetInstance _flatModifiers
```

Field Value

[StatSetInstance](#)

_percentageModifiers

```
protected StatSetInstance _percentageModifiers
```

Field Value

[StatSetInstance](#)

Properties

EntityClass

The class source of the entity. In most cases, this is the [EntityClass](#) component attached to the entity.

```
public IClassSource EntityClass { get; }
```

Property Value

[IClassSource](#)

EntityCore

The conveniently cached [EntityCore](#) component of the entity.

```
public EntityCore EntityCore { get; }
```

Property Value

[EntityCore](#)

OnStatChanged

Event raised when a stat changes due to a modifier.

```
public StatChangedGameEvent OnStatChanged { get; }
```

Property Value

[StatChangedGameEvent](#)

StatSet

The stat set used to calculate the entity's stats.

```
public virtual StatSet StatSet { get; }
```

Property Value

[StatSet](#)

If useBaseStatsFromClass is true, it returns the stat set of the entity's class. Otherwise, it returns the fixed base stats stat set.

UseClassBaseStats

Indicates whether to use base stats from the entity's class or the fixed base stats.

```
public bool UseClassBaseStats { get; }
```

Property Value

bool

Methods

AddFlatModifier(Stat, long)

Adds a flat modifier to a stat.

```
public void AddFlatModifier(Stat stat, long value)
```

Parameters

stat [Stat](#)

The stat to add the flat modifier to.

value long

The value of the flat modifier.

AddPercentageModifier(Stat, Percentage)

Adds a [Percentage](#) modifier to a stat. Such modifiers consider the base value of the stat, the flat modifiers, and the stat-to-stat modifiers.

```
public void AddPercentageModifier(Stat stat, Percentage value)
```

Parameters

stat [Stat](#)

The stat to add the percentage modifier to.

value [Percentage](#)

The value of the percentage modifier.

AddStatToStatModifer(Stat, Stat, Percentage)

Adds a stat-to-stat modifier. Such modifiers add a percentage of the source stat to the target stat. Such modifiers consider the base value and the flat modifiers of the source stat.

```
public void AddStatToStatModifer(Stat target, Stat source, Percentage percentage)
```

Parameters

target Stat

The target stat.

source Stat

The source stat.

percentage Percentage

The [Percentage](#) of the source stat to add to the target stat.

Get(Stat)

The final value of a stat, considering all the modifiers. Calculation is done in the following order:

1. Base value
2. Flat modifiers
3. Stat to stat modifiers
4. Percentage modifiers

```
public virtual long Get(Stat stat)
```

Parameters

stat Stat

The stat to get the final value of.

Returns

long

The final value of the stat. The value is clamped to the stat's min and max values.

GetBase(Stat)

The base value is the value of the stat without any modifiers. If UseClassBaseStats is true, it returns the value from the entity's class. Otherwise, it returns the value from the fixed base stats.

```
public long GetBase(Stat stat)
```

Parameters

stat [Stat](#)

The stat to get the base value of.

Returns

long

The base value of the stat. The value is clamped to the stat's min and max values.

OnLevelUp(int)

Callback method called when the entity levels up.

```
protected virtual void OnLevelUp(int level)
```

Parameters

level int

The new level of the entity.

SetFixed(Stat, long)

Sets the value of a fixed base stat.

```
public void SetFixed(Stat s, long v)
```

Parameters

s [Stat](#)

The stat to set.

v long

The value to set.

Interface IStatContainer

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public interface IStatContainer
```

Methods

Contains(Stat)

```
bool Contains(Stat stat)
```

Parameters

stat [Stat](#)

Returns

bool

Class Stat

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Stat", menuName = "Simple RPG Core/Stat")]
public class Stat : BoundedValue
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← [BoundedValue](#) ← Stat

Inherited Members

[BoundedValue.HasValue](#) , [BoundedValue.MaxValue](#) , [BoundedValue.HasMinValue](#) ,
[BoundedValue.MinValue](#)

Properties

AttributesScaling

```
[CanBeNull]
public AttributesScalingComponent AttributesScaling { get; }
```

Property Value

[AttributesScalingComponent](#)

Methods

Equals(object)

```
public override bool Equals(object obj)
```

Parameters

obj object

Returns

bool

GetHashCode()

```
public override int GetHashCode()
```

Returns

int

Operators

operator ==(Stat, Stat)

```
public static bool operator ==(Stat a, Stat b)
```

Parameters

a [Stat](#)

b [Stat](#)

Returns

bool

operator !=(Stat, Stat)

```
public static bool operator !=(Stat a, Stat b)
```

Parameters

a [Stat](#)

b [Stat](#)

Returns

bool

Class StatSet

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New StatSet", menuName = "Simple RPG Core/Stat Set")]
public class StatSet : ScriptableObject, IStatContainer
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← StatSet

Implements

[IStatContainer](#)

Properties

Stats

```
public IReadOnlyList<Stat> Stats { get; }
```

Property Value

IReadOnlyList<[Stat](#)>

Methods

Contains(Stat)

```
public virtual bool Contains(Stat stat)
```

Parameters

stat [Stat](#)

Returns

bool

Get(Stat)

```
public Stat Get(Stat stat)
```

Parameters

stat [Stat](#)

Returns

[Stat](#)

Class StatSetInstance

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public class StatSetInstance : IStatContainer
```

Inheritance

object ← StatSetInstance

Implements

[IStatContainer](#)

Constructors

StatSetInstance(StatSet)

```
public StatSetInstance(StatSet statSet)
```

Parameters

statSet [StatSet](#)

Properties

this[Stat]

```
public long this[Stat stat] { get; set; }
```

Parameters

stat [Stat](#)

Property Value

long

Stats

```
public Dictionary<Stat, long> Stats { get; }
```

Property Value

Dictionary<[Stat](#), long>

Methods

AddValue(Stat, long)

Adds [value](#) to [stat](#). If the stat does not exist, it will be created and initialized with [value](#). Use negative values to subtract from the stat.

```
public void AddValue(Stat stat, long value)
```

Parameters

[stat](#) [Stat](#)

The stat to add the value to.

[value](#) long

The value to add to the stat.

Clone()

```
public StatSetInstance Clone()
```

Returns

[StatSetInstance](#)

Contains(Stat)

```
public bool Contains(Stat stat)
```

Parameters

stat [Stat](#)

Returns

bool

Get(Stat)

```
public long Get(Stat stat)
```

Parameters

stat [Stat](#)

The stat to be retrieved.

Returns

long

The value of the **stat**

GetAsPercentage(Stat)

```
public Percentage GetAsPercentage(Stat stat)
```

Parameters

stat [Stat](#)

Returns

Percentage

GetEnumerator()

```
public IEnumarator<KeyValuePair<Stat, long>> GetEnumerator()
```

Returns

IEnumarator<KeyValuePair<[Stat](#), long>>

Operators

operator +(StatSetInstance, StatSetInstance)

The addition operator for StatSetInstance. Considered the stats present in the StatSetInstance [a](#), their values will be summed with the values of the respective stats in the StatSetInstance [b](#). If a stat is present in the StatSetInstance [a](#) but not in the StatSetInstance [b](#), an exception will be thrown.

```
public static StatSetInstance operator +(StatSetInstance a, StatSetInstance b)
```

Parameters

[a](#) [StatSetInstance](#)

The first StatSetInstance

[b](#) [StatSetInstance](#)

The second StatSetInstance

Returns

[StatSetInstance](#)

A new StatSetInstance with the sum of the stats of [a](#) to the respective values of the stats of [b](#)

Class StatToStatModifier

Namespace: [ElectricDrill.SimpleRpgCore.Stats](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu(fileName = "New Stat to Stat Modifier", menuName = "Simple RPG Core/Stat to Stat Modifier")]
public class StatToStatModifier : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← StatToStatModifier

Properties

Percentage

```
public Percentage Percentage { get; }
```

Property Value

[Percentage](#)

SourceStat

```
public Stat SourceStat { get; }
```

Property Value

[Stat](#)

TargetStat

```
public Stat TargetStat { get; }
```

Property Value

[Stat](#)

Namespace ElectricDrill.SimpleRpgCore.Utils

Classes

[InitializationUtils](#)

[IntRef](#)

[IntVar](#)

[LongRef](#)

[LongVar](#)

[Percentage](#)

The Percentage class represents a percentage value and provides various operators and conversions.

Implicit long to Percentage value conversion is available. To express a 100% value, use 100L.

Implicit Percentage to double conversion is available. When doing so, the percentage is automatically divided by 100.

[SerializableDictionary< TKey, TValue >](#)

[SerializableHashSet< T >](#)

Structs

[SerKeyValPair< T, U >](#)

Class InitializationUtils

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
public static class InitializationUtils
```

Inheritance

object ← InitializationUtils

Methods

RefreshInspectorReservedValues<TKey, TValue>(ref List<SerKeyValPair<TKey, TValue>>, IEnumerable<TKey>)

```
public static void RefreshInspectorReservedValues<TKey, TValue>(ref List<SerKeyValPair<TKey, TValue>> inspectorReservedValues, IEnumerable<TKey> keys)
```

Parameters

inspectorReservedValues List<[SerKeyValPair](#)<TKey, TValue>>

keys IEnumerable<TKey>

Type Parameters

TKey

TValue

Class IntRef

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class IntRef
```

Inheritance

object ← IntRef

Fields

ConstantValue

```
public int ConstantValue
```

Field Value

int

UseConstant

```
public bool UseConstant
```

Field Value

bool

Variable

```
public IntVar Variable
```

Field Value

[IntVar](#)

Properties

Value

```
public int Value { get; set; }
```

Property Value

int

Operators

implicit operator int(IntRef)

```
public static implicit operator int(IntRef reference)
```

Parameters

reference [IntRef](#)

Returns

int

implicit operator IntRef(int)

```
public static implicit operator IntRef(int value)
```

Parameters

value int

Returns

[IntRef](#)

Class IntVar

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu]  
public class IntVar : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← IntVar

Properties

Value

```
public int Value { get; set; }
```

Property Value

int

Operators

implicit operator int(IntVar)

```
public static implicit operator int(IntVar var)
```

Parameters

var [IntVar](#)

Returns

int

Class LongRef

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class LongRef
```

Inheritance

object ← LongRef

Fields

ConstantValue

```
public long ConstantValue
```

Field Value

long

UseConstant

```
public bool UseConstant
```

Field Value

bool

Variable

```
public LongVar Variable
```

Field Value

[LongVar](#)

Properties

Value

```
public long Value { get; set; }
```

Property Value

long

Operators

implicit operator long(LongRef)

```
public static implicit operator long(LongRef reference)
```

Parameters

reference [LongRef](#)

Returns

long

Class LongVar

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[CreateAssetMenu]  
public class LongVar : ScriptableObject
```

Inheritance

object ← [Object](#) ← [ScriptableObject](#) ← LongVar

Properties

Value

```
public long Value { get; set; }
```

Property Value

long

Operators

implicit operator long(LongVar)

```
public static implicit operator long(LongVar var)
```

Parameters

var [LongVar](#)

Returns

long

Class Percentage

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

The Percentage class represents a percentage value and provides various operators and conversions. Implicit long to Percentage value conversion is available. To express a 100% value, use 100L. Implicit Percentage to double conversion is available. When doing so, the percentage is automatically divided by 100.

```
[Serializable]
public class Percentage
```

Inheritance

object ← Percentage

Constructors

Percentage(long)

Initializes a new instance of the Percentage class with the specified value. To express a 100% value, use 100L.

```
public Percentage(long value)
```

Parameters

value long

The value of the percentage.

Methods

CompareTo(Percentage)

Compares the current Percentage instance with another Percentage instance.

```
public int CompareTo(Percentage other)
```

Parameters

other Percentage

The other percentage to compare to.

Returns

int

An integer indicating the relative order of the percentages.

ToString()

Returns a string representation of the percentage value.

```
public override string ToString()
```

Returns

string

A string representing the percentage value.

Operators

operator +(Percentage, Percentage)

Overrides the + operator to add two Percentage instances.

```
public static Percentage operator +(Percentage a, Percentage b)
```

Parameters

a Percentage

The first percentage.

b [Percentage](#)

The second percentage.

Returns

[Percentage](#)

A new Percentage instance representing the sum.

explicit operator long(Percentage)

Explicit conversion from Percentage to long. The conversion does not divide the value by 100.

```
public static explicit operator long(Percentage percentage)
```

Parameters

percentage [Percentage](#)

The percentage to convert.

Returns

long

implicit operator double(Percentage)

Implicit conversion from Percentage to double. The conversion automatically divides the value by 100.

```
public static implicit operator double(Percentage percentage)
```

Parameters

percentage [Percentage](#)

The percentage to convert.

Returns

double

implicit operator Percentage(long)

Implicit conversion from long to Percentage. To express a 100% value, use 100L.

```
public static implicit operator Percentage(long value)
```

Parameters

value long

The value to convert.

Returns

[Percentage](#)

operator -(Percentage, Percentage)

Overrides the - operator to subtract one Percentage from another.

```
public static Percentage operator -(Percentage a, Percentage b)
```

Parameters

a [Percentage](#)

The first percentage.

b [Percentage](#)

The second percentage.

Returns

[Percentage](#)

A new Percentage instance representing the difference.

operator -(Percentage)

Overrides the unary - operator to negate a Percentage.

```
public static Percentage operator -(Percentage a)
```

Parameters

a [Percentage](#)

The percentage to negate.

Returns

[Percentage](#)

A new Percentage instance representing the negated value.

Struct SerKeyValuePair<T, U>

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public struct SerKeyValuePair<T, U>
```

Type Parameters

T

U

Constructors

SerKeyValuePair(T, U)

```
public SerKeyValuePair(T key, U value)
```

Parameters

key T

value U

Fields

Key

```
public T Key
```

Field Value

T

Value

```
public U Value
```

Field Value

U

Operators

implicit operator KeyValuePair<T, U>(SerKeyValPair<T, U>)

```
public static implicit operator KeyValuePair<T, U>(SerKeyValPair<T, U> serKeyValPair)
```

Parameters

serKeyValPair [SerKeyValPair](#)<T, U>

Returns

KeyValuePair<T, U>

implicit operator SerKeyValPair<T, U>(KeyValuePair<T, U>)

```
public static implicit operator SerKeyValPair<T, U>(KeyValuePair<T, U> keyValuePair)
```

Parameters

keyValuePair KeyValuePair<T, U>

Returns

[SerKeyValPair](#)<T, U>

Class SerializableDictionary<TKey, TValue>

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class SerializableDictionary<TKey, TValue>
```

Type Parameters

TKey

TValue

Inheritance

object < SerializableDictionary<TKey, TValue>

Properties

this[TKey]

```
public TValue this[TKey key] { get; set; }
```

Parameters

key TKey

Property Value

TValue

Keys

```
public Dictionary<TKey, TValue>.KeyCollection Keys { get; }
```

Property Value

Dictionary< TKey, TValue>.KeyCollection

Values

```
public Dictionary< TKey, TValue>.ValueCollection Values { get; }
```

Property Value

Dictionary< TKey, TValue>.ValueCollection

Methods

Clear()

```
public void Clear()
```

ContainsKey(TKey)

```
public bool ContainsKey(TKey key)
```

Parameters

key TKey

Returns

bool

GetEnumerator()

```
public IEnumerator<KeyValuePair< TKey, TValue>> GetEnumerator()
```

Returns

IEnumerator<KeyValuePair<TKey, TValue>>

OnAfterDeserialize()

Implement this callback to transform data back into runtime data types after an object is serialized.

```
public void OnAfterDeserialize()
```

OnBeforeSerialize()

Implement this callback to transform data into serializable data types immediately before an object is serialized.

```
public void OnBeforeSerialize()
```

TryGetValue(TKey, out TValue)

```
public bool TryGetValue(TKey key, out TValue value)
```

Parameters

key TKey

value TValue

Returns

bool

Operators

implicit operator Dictionary<TKey, TValue>

(SerializableDictionary<TKey, TValue>)

```
public static implicit operator Dictionary<TKey, TValue>(SerializableDictionary<TKey, TValue> serializableDictionary)
```

Parameters

serializableDictionary [SerializableDictionary<TKey, TValue>](#)

Returns

[Dictionary<TKey, TValue>](#)

implicit operator SerializableDictionary<TKey, TValue> (Dictionary<TKey, TValue>)

```
public static implicit operator SerializableDictionary<TKey, TValue>(Dictionary<TKey, TValue> dictionary)
```

Parameters

dictionary [Dictionary<TKey, TValue>](#)

Returns

[SerializableDictionary<TKey, TValue>](#)

Class SerializableHashSet<T>

Namespace: [ElectricDrill.SimpleRpgCore.Utils](#)

Assembly: ElectricDrill.SimpleRPGCore.Runtime.dll

```
[Serializable]
public class SerializableHashSet<T>
```

Type Parameters

T

Inheritance

object ← SerializableHashSet<T>

Properties

Count

```
public int Count { get; }
```

Property Value

int

IsReadOnly

```
public bool IsReadOnly { get; }
```

Property Value

bool

Methods

Add(T)

```
public void Add(T item)
```

Parameters

item T

Clear()

```
public void Clear()
```

Contains(T)

```
public bool Contains(T item)
```

Parameters

item T

Returns

bool

CopyTo(T[], int)

```
public void CopyTo(T[] array, int arrayIndex)
```

Parameters

array T[]

arrayIndex int

GetEnumerator()

```
public IEnumarator<T> GetEnumerator()
```

Returns

IEnumerator<T>

GetObjectData(SerializationInfo, StreamingContext)

```
public void GetObjectData(SerializationInfo info, StreamingContext context)
```

Parameters

info SerializationInfo

context StreamingContext

OnAfterDeserialize()

Implement this callback to transform data back into runtime data types after an object is deserialized.

```
public void OnAfterDeserialize()
```

OnBeforeSerialize()

Implement this callback to transform data into serializable data types immediately before an object is serialized.

```
public void OnBeforeSerialize()
```

Remove(T)

```
public bool Remove(T item)
```

Parameters

item T

Returns

bool

RemoveWhere(Predicate<T>)

```
public int RemoveWhere(Predicate<T> match)
```

Parameters

match Predicate<T>

Returns

int