

# 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

## 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](#)

## Methods

### Get(Attribute)

```
public long Get(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](#)

### \_flatModifiersStats

```
protected StatSetInstance _flatModifiersStats
```

#### 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