PiRho Variables

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Global Variables Behaviour

Fields

Serialized Variable Dictionary Variables

<<<

Variables Behaviour

Fields

Serialized Variable Dictionary Variables

<<<

Variable Schema

Fields

Variable Definition List Definitions

:imagesdir: reference/

AggregateDictionary

PiRhoSoft.Variables.AggregateDictionary: IVariableDictionary

Description

Constructors

AggregateDictionary()

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (virtual)

Public Methods

void AddVariables(IVariableDictionary variables)
void RemoveVariables(IVariableDictionary variables)
Variable GetVariable(string name) (virtual)

SetVariableResult SetVariable(string name, Variable variable) (virtual)

SetVariableResult AddVariable(string name, Variable variable) (virtual)

SetVariableResult RemoveVariable(string name) (virtual)

SetVariableResult ClearVariables() (virtual)

<<<

AssetConstraint

PiRhoSoft, Variables. AssetConstraint: VariableConstraint

Description

Constructors

AssetConstraint()

AssetConstraint(string label)

Public Fields

string Label

Public Properties

VariableType Type (read only) (virtual)

Public Methods

Variable Generate() (virtual)

bool IsValid(Variable value) (virtual)

<<<

ChildDictionary

PiRhoSoft.Variables.ChildDictionary: IVariableDictionary

Description

Constructors

ChildDictionary(IVariableDictionary parent)

ChildDictionary(IVariableDictionary parent, IVariableDictionary child)

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (virtual)

Public Methods

Variable GetVariable(string name) (virtual)

SetVariableResult SetVariable(string name, Variable variable) (virtual)

SetVariableResult AddVariable(string name, Variable variable) (virtual)

SetVariableResult RemoveVariable(string name) (virtual)

SetVariableResult ClearVariables() (virtual)

<<<

DictionaryConstraint

PiRhoSoft.Variables.DictionaryConstraint: VariableConstraint

Description

Constructors

DictionaryConstraint()

DictionaryConstraint(VariableSchema schema)

Public Fields

VariableSchema Schema

Public Properties

VariableType Type (read only) (virtual)

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

EnumConstraint

PiRhoSoft.Variables.EnumConstraint: VariableConstraint

Description

Constructors

EnumConstraint()

EnumConstraint(Type type)

Public Properties

VariableType Type (read only) (virtual)

Type EnumType

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

FloatConstraint

PiRhoSoft.Variables.FloatConstraint: VariableConstraint

Description

Static Fields

float DefaultMinimum

float DefaultMaximum

Constructors

FloatConstraint()

FloatConstraint(Nullable<float> minimum, Nullable<float> maximum)

Public Fields

bool HasMinimum

bool HasMaximum

float Minimum

float Maximum

Public Properties

VariableType Type (read only) (virtual)

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

GlobalVariablesBehaviour

PiRhoSoft.Variables.GlobalVariablesBehaviour: MonoBehaviour

Description

Constructors

GlobalVariablesBehaviour()

Public Fields

SerializedVariableDictionary Variables

<<<

IMappedProperty

PiRhoSoft.Variables.IMappedProperty

Description

Public Properties

Type PropertyType (read only) (abstract)

Public Methods

Variable Lookup(Variable owner) (abstract)

SetVariableResult Assign(Variable owner, Variable value) (abstract)

<<<

IMappedProperty

PiRhoSoft.Variables.IMappedProperty<Type>: IMappedProperty

Description

Public Methods

Type Lookup(Object owner) (abstract)

SetVariableResult Assign(Object owner, Type value) (abstract)

<<<

IntConstraint

PiRhoSoft.Variables.IntConstraint: VariableConstraint

Description

Static Fields

int DefaultMinimum int DefaultMaximum

Constructors

IntConstraint()

IntConstraint(Nullable<int> minimum, Nullable<int> maximum)

Public Fields

bool HasMinimum

bool HasMaximum

int Minimum

int Maximum

Public Properties

VariableType Type (read only) (virtual)

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

InvalidEnum

PiRhoSoft.Variables.InvalidEnum

Description

Values

InvalidEnum *Invalid*

<<<

IObjectMap

PiRhoSoft.Variables.IObjectMap

Description

Public Methods

<<<

IVariableDictionary

PiRhoSoft.Variables.IVariableDictionary

Description

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (abstract)

Public Methods

Variable GetVariable(string name) (abstract)

SetVariableResult SetVariable(string name, Variable variable) (abstract)

SetVariableResult AddVariable(string name, Variable variable) (abstract)

SetVariableResult RemoveVariable(string name) (abstract)

SetVariableResult ClearVariables() (abstract)

<<<

IVariableFunction

PiRhoSoft.Variables.IVariableFunction

Description

Public Methods

int Validate(Variable[] parameters) (abstract)

Variable Invoke(Variable[] parameters) (abstract)

<<<

IVariableHierarchy

PiRhoSoft. Variables. IVariable Hierarchy: IVariable Dictionary

Description

IVariableList

PiRhoSoft.Variables.IVariableList

Description

Public Properties

int VariableCount (read only) (abstract)

Public Methods

Variable GetVariable(int index) (abstract)

SetVariableResult SetVariable(int index, Variable variable) (abstract)

SetVariableResult AddVariable(Variable variable) (abstract)

SetVariableResult InsertVariable(int index, Variable variable) (abstract)

SetVariableResult RemoveVariable(int index) (abstract)

SetVariableResult ClearVariables() (abstract)

<<<

ListConstraint

PiRhoSoft.Variables.ListConstraint: VariableConstraint

Description

Constructors

ListConstraint()

ListConstraint(VariableType type)

ListConstraint(VariableConstraint itemConstraint)

Public Properties

VariableType Type (read only) (virtual)

VariableType ItemType

VariableConstraint ItemConstraint

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

ObjectConstraint

PiRhoSoft.Variables.ObjectConstraint: VariableConstraint

Description

Constructors

ObjectConstraint()
ObjectConstraint(Type type)
Public Properties

VariableType Type (read only) (virtual)

Type ObjectType

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable variable) (virtual)

<<<

ObjectMap

PiRhoSoft.Variables.ObjectMap: IObjectMap

Description

Static Methods

IObjectMap Get(Type type)

void Register(Type type, IObjectMap map)

Public Methods

void Add(string name, IMappedProperty property)

Protected Constructors

ObjectMap()

<<<

ObjectMap

PiRhoSoft.Variables.ObjectMap<ObjectType>: ObjectMap

Description

Static Methods

void Add<PropertyType>(string propertyName, Func<ObjectType, ObjectType> lookup,
Action<ObjectType, ObjectType> assign)

void Add<PropertyType>(string propertyName, Func<ObjectType, ObjectType> lookup)

Constructors

ObjectMap()

<<<

SceneDictionary

PiRhoSoft.Variables.SceneDictionary: IVariableDictionary

Description

Static Fields

IReadOnlyCollection<string> Names

Static Methods

void RefreshNames()

Constructors

SceneDictionary()

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (virtual)

Public Methods

Variable GetVariable(string name) (virtual)

SetVariableResult SetVariable(string name, Variable value) (virtual)

SetVariableResult AddVariable(string name, Variable variable) (virtual)

SetVariableResult RemoveVariable(string name) (virtual)

SetVariableResult ClearVariables() (virtual)

<<<

SerializedVariable

PiRhoSoft.Variables.SerializedVariable

Description

Constructors

SerializedVariable()



Variable Variable

<<<

SerializedVariableDictionary

PiRhoSoft.Variables.SerializedVariableDictionary: VariableDictionary

Description

Constructors

SerializedVariableDictionary()

<<<

SerializedVariableList

PiRhoSoft.Variables.SerializedVariableList: VariableList

Description

Constructors

SerializedVariableList()

<<<

SetVariableResult

PiRhoSoft. Variables. Set Variable Result

Description

Values

SetVariableResult Success
SetVariableResult NotFound
SetVariableResult ReadOnly
SetVariableResult TypeMismatch

<<<

StringConstraint

PiRhoSoft.Variables.StringConstraint: VariableConstraint

Description

Constructors

StringConstraint()

StringConstraint(IList<string> values)

Public Properties

VariableType Type (read only) (virtual)

List<string> Values

Public Methods

string ToString() (virtual)

Variable Generate() (virtual)

bool IsValid(Variable value) (virtual)

<<<

${\bf String Constraint Value List}$

PiRhoSoft.Variables.StringConstraintValueList: SerializedList<string>

Description

Constructors

StringConstraintValueList()

<<<

Variable

PiRhoSoft.Variables.Variable: ValueType

Description

Static Fields

Variable *Empty*

Static Methods

```
Variable Unbox(Object obj)
```

Variable Create(VariableType type)

Variable Create<T>(T *value*)

VariableType GetType(Type *type*)

Variable Bool(bool value)

Variable Int(int value)

Variable Float(float value)

Variable Vector2Int(Vector2Int value)

Variable Vector3Int(Vector3Int value)

Variable RectInt(RectInt value)

Variable BoundsInt(BoundsInt value)

Variable Vector2(Vector2 value)

Variable Vector3(Vector3 value)

Variable Vector4(Vector4 value)

Variable Quaternion (Quaternion value)

Variable Rect(Rect value)

Variable Bounds (Bounds value)

Variable Color(Color value)

bool IsValidEnumType(Type type)

Variable Enum(Enum value)

Variable Enum

EnumType(EnumType value)

Variable String(string *value***)**

Variable List(IVariableList value)

Variable Dictionary (IVariable Dictionary value)

Variable Asset(AssetReference value)

Variable Object(Object value)

Variable Function(IVariableFunction value)

Variable Load(SerializedDataReader reader)

Variable Add(Variable left, Variable right)

Variable Subtract(Variable left, Variable right)

Variable Multiply(Variable left, Variable right)

Variable Divide(Variable *left*, Variable *right*)

Variable Modulo(Variable *left*, Variable *right*)

Variable Exponent(Variable left, Variable right)

Variable Negate(Variable value)

Nullable

bool > Is Equal (Variable left, Variable right)

Nullable<int> Compare(Variable left, Variable right)

float Distance(Variable from, Variable to)

Variable Interpolate(Variable from, Variable to, float time)

Variable Lookup(Variable owner, Variable lookup)

 ${\bf Set Variable \ } {\bf Nariable \ } {\bf lookup, Variable \ } {\bf value)$

Public Properties

bool IsValueType (read only)

VariableType Type (read only)

bool IsEmpty (read only)

bool IsBool (read only)

bool AsBool (read only)

bool IsInt (read only)

int AsInt (read only)

bool IsFloat (read only)

float AsFloat (read only)

bool IsVector2Int (read only)

Vector2Int AsVector2Int (read only)

bool IsVector3Int (read only)

Vector3Int AsVector3Int (read only)

bool IsRectInt (read only)

RectInt AsRectInt (read only)

bool IsBoundsInt (read only)

BoundsInt AsBoundsInt (read only)

bool IsVector2 (read only)

Vector2 As Vector2 (read only)

bool IsVector3 (read only)

Vector3 As Vector3 (read only)

bool IsVector4 (read only)

Vector4 As Vector4 (read only)

bool IsQuaternion (read only)

Quaternion AsQuaternion (read only)

bool IsRect (read only)

Rect AsRect (read only)

bool IsBounds (read only)

Bounds AsBounds (read only)

bool IsColor (read only)

Color AsColor (read only)

bool IsEnum (read only)

Enum AsEnum (read only)

Type EnumType (read only)

bool IsString (read only)

string AsString (read only)

bool IsList (read only)

IVariableList AsList (read only)

bool IsDictionary (read only)

IVariableDictionary AsDictionary (read only)

bool IsAsset (read only)

AssetReference AsAsset (read only)

bool IsObject (read only)

Object AsObject (read only)

bool IsNullObject (read only)

Type ObjectType (read only)

bool IsFunction (read only)

IVariableFunction AsFunction (read only)

Public Methods

Object Box()
bool Is(Varia

bool Is(VariableType type)

bool Is<T>()

bool Is(Type type)

T As<T>()

bool TryGet<T>(T value (out))

bool TryGetBool(bool value (out))

bool TryGetInt(int value (out))

bool TryGetFloat(float value (out))

bool TryGetVector2Int(Vector2Int value (out))

bool TryGetVector3Int(Vector3Int value (out))

bool TryGetRectInt(RectInt value (out))

bool TryGetBoundsInt(BoundsInt value (out))

bool TryGetVector2(Vector2 value (out))

bool TryGetVector3(Vector3 value (out))

bool TryGetVector4(Vector4 value (out))

bool TryGetQuaternion(Quaternion value (out))

bool TryGetRect(Rect value (out))

bool TryGetBounds(Bounds value (out))

bool TryGetColor(Color value (out))

bool TryGetEnum(Enum value (out))

bool HasEnum<EnumType>()

EnumType GetEnum<EnumType>()

bool TryGetEnum<EnumType>(EnumType value (out))

bool HasEnum(Type enumType)

Enum GetEnum(Type enumType)

bool TryGetEnum(Type enumType, Enum value (out))

bool TryGetString(string value (out))

bool TryGetList(IVariableList value (out))

bool TryGetDictionary(IVariableDictionary value (out))

bool TryGetAsset(AssetReference value (out))

bool TryGetObject(Object value (out))

bool HasObject<ObjectType>()

ObjectType GetObject<ObjectType>()

bool TryGetObject<ObjectType>(ObjectType value (out))

bool HasObject(Type objectType)

Object GetObject(Type objectType)

bool TryGetObject(Type objectType, Object value (out))

bool TryGetFunction(IVariableFunction value (out))

string ToString() (virtual)

<<<

VariableConstraint

PiRhoSoft.Variables.VariableConstraint

Description

Static Methods

VariableConstraint Create(VariableType type)

Public Properties

VariableType Type (read only) (abstract)

Public Methods

Variable Generate() (abstract)

bool IsValid(Variable value) (abstract)

Protected Constructors

VariableConstraint()

<<<

VariableConstraintAttribute

PiRhoSoft.Variables.VariableConstraintAttribute: Attribute

Description

Constructors

VariableConstraintAttribute(VariableType type)

VariableConstraintAttribute(int minimum, int maximum)

VariableConstraintAttribute(bool noMinimum, int maximum)

VariableConstraintAttribute(int minimum, bool noMaximum)

VariableConstraintAttribute(float minimum, float maximum)

VariableConstraintAttribute(bool noMinimum, float maximum)

VariableConstraintAttribute(float minimum, bool noMaximum)

VariableConstraintAttribute(string[] values)

VariableConstraintAttribute(string label)

VariableConstraintAttribute(Type type)

Public Properties

VariableType Type (read only)

VariableConstraint Constraint (read only)

Public Methods

VariableDefinition GetDefinition(string *name*)

<<<

VariableContext

PiRhoSoft.Variables.VariableContext: AggregateDictionary

Description

Static Fields

string SceneName

VariableDictionary GlobalDictionary

SceneDictionary SceneDictionary

VariableContext Default

Constructors

VariableContext()

Public Methods

void AddDefaultVariables()

<<<

VariableDefinition

PiRhoSoft.Variables.VariableDefinition

Description

Constructors

VariableDefinition()

VariableDefinition(string name)

VariableDefinition(string name, VariableType type)

VariableDefinition(string name, VariableConstraint constraint)

Public Fields

string Name

Public Properties

string Description (read only)

VariableType Type

VariableConstraint *Constraint*

Variable DefaultValue

Public Methods

Variable Generate()

bool IsValid(Variable variable)

<<<

VariableDefinitionList

PiRhoSoft.Variables.VariableDefinitionList: SerializedList<VariableDefinition>

Description

Constructors

VariableDefinitionList()

<<<

VariableDictionary

PiRhoSoft.Variables.VariableDictionary : IVariableDictionary, IEnumerable, ICollection<KeyValuePair<string, string>>, IDictionary<string, string>, IEnumerable<KeyValuePair<string, string>>

Description

Constructors

VariableDictionary()

VariableDictionary(IDictionary<string, string> variables)

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (virtual)

int Count (read only) (virtual)

ICollection<string> Keys (read only) (virtual)

ICollection < Variable > Values (read only) (virtual)

bool IsReadOnly (read only) (virtual)

Variable Item (virtual)

Public Methods

```
void LoadFrom(IVariableDictionary map)
void SaveTo(IVariableDictionary map)
Variable GetVariable(string name) (virtual)
SetVariableResult SetVariable(string name,
```

SetVariableResult SetVariable(string name, Variable variable) (virtual)

SetVariableResult AddVariable(string name, Variable variable) (virtual)

SetVariableResult RemoveVariable(string name) (virtual)

SetVariableResult ClearVariables() (virtual)

bool Contains(KeyValuePair<string, string> item) (virtual)

bool ContainsKey(string key) (virtual)

bool TryGetValue(string key, Variable value (out)) (virtual)

void Add(string key, Variable value) (virtual)

void Add(KeyValuePair<string, string> item) (virtual)

bool Remove(string key) (virtual)

bool Remove(KeyValuePair<string, string> item) (virtual)

void Clear() (virtual)

void CopyTo(KeyValuePair<string, string>[] array, int arrayIndex) (virtual)

IEnumerator<KeyValuePair<string, string>> GetEnumerator() (virtual)

<<<

VariableFunction

PiRhoSoft.Variables.VariableFunction: IVariableFunction

Description

Static Fields

int Valid
int NotFound
int IncorrectLength

Constructors

VariableFunction(Delegate d)

Public Methods

int Validate(Variable[] arguments) (virtual)

Variable Invoke(Variable[] arguments) (virtual)

Variable UncheckedInvoke(Variable[] arguments)

<<<

VariableFunctionException

PiRhoSoft.Variables.VariableFunctionException: Exception

Description

Constructors

VariableFunctionException()

<<<

VariableList

PiRhoSoft.Variables.VariableList : IEnumerable, IList<Variable>, IVariableList, ICollection<Variable>, IEnumerable<Variable>

Description

Constructors

VariableList()

VariableList(IList<Variable> variables)

Public Properties

int VariableCount (read only) (virtual)
int Count (read only) (virtual)
bool IsReadOnly (read only) (virtual)

Variable Item (virtual)

Public Methods

Variable GetVariable(int index) (virtual)

SetVariableResult SetVariable(int index, Variable variable) (virtual)

SetVariableResult AddVariable(Variable variable) (virtual)

SetVariableResult InsertVariable(int index, Variable variable) (virtual)

SetVariableResult RemoveVariable(int index) (virtual)

SetVariableResult ClearVariables() (virtual)

int IndexOf(Variable item) (virtual)

bool Contains(Variable item) (virtual)

void Add(Variable item) (virtual)

void Insert(int index, Variable item) (virtual)

bool Remove(Variable item) (virtual)

void RemoveAt(int index) (virtual)

void Clear() (virtual)

void CopyTo(Variable[] array, int arrayIndex) (virtual)

IEnumerator<Variable> GetEnumerator() (virtual)

<<<

VariableOverload

PiRhoSoft.Variables.VariableOverload: IVariableFunction

Description

Constructors

VariableOverload(Delegate[] functions)

Public Methods

int Validate(Variable[] parameters) (virtual)

Variable Invoke(Variable[] parameters) (virtual)

<<<

VariablesBehaviour

PiRhoSoft. Variables. Variables Behaviour: MonoBehaviour, IV ariable Dictionary, IV ariable Hierarchy and PirkhoSoft. Variables are also behaviour. The property of the prop

Description

Constructors

VariablesBehaviour()

Public Fields

SerializedVariableDictionary Variables

Public Properties

IReadOnlyCollection<string> VariableNames (read only) (virtual)

Public Methods

Variable GetVariable(string name) (virtual)

SetVariableResult SetVariable(string name, Variable variable) (virtual)

SetVariableResult AddVariable(string name, Variable variable) (virtual)

SetVariableResult RemoveVariable(string name) (virtual)

SetVariableResult ClearVariables() (virtual)

<<<

VariableSchema

PiRhoSoft.Variables.VariableSchema: ScriptableObject

Description

Constructors

VariableSchema()

Public Fields

VariableDefinitionList Definitions

Public Methods

bool IsImplementedBy(IVariableDictionary variables, bool exact) void ApplyTo(IVariableDictionary variables)

<<<

VariableType

PiRhoSoft.Variables.VariableType

Description

Values

VariableType *Empty*

VariableType Bool

VariableType Int

VariableType Float

VariableType Vector2Int

VariableType Vector3Int

VariableType RectInt

VariableType BoundsInt

VariableType Vector2

VariableType Vector3

VariableType Vector4

VariableType Quaternion

VariableType Rect

VariableType Bounds

VariableType Color

VariableType Enum

VariableType String

VariableType List

VariableType Dictionary

VariableType Asset

VariableType Object

VariableType Function