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APIs

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Monkeyshines – A swinging good time!



Princess Piano – Learn musical notation in this melodious adventure!

LeanTween Class

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Defined in: LeanTween.js:451

LeanTween is an efficient tweening engine for Unity3d

Optional Parameters are passed in a hash table variable that is accepted at the end of every tweening function.

Values you can pass:

delay: time (or frames if you are using "useFrames") before the tween starts

ease: Function that desribes the easing you want to be used, you can pass your own or use many of the included tweens. ex: {"ease":LeanTween.easeOutQuad}

onComplete: Function to call at the end of the tween ex: {"onComplete":functionToCallOnComplete} or {"onComplete":functionToCallOnComplete, "onCompleteParam":hashTableToPassToOnComplete} onUpdate: Function to call on every update ex: {"onUpdate":functionToCallOnUpdate} or

useEstimatedTime: This is useful if the Time.timeScale is set to zero (such as when the game is paused) or
some other value and you still want the tween to move at a normal pace ex: {"useEstimatedTime":true}
useFrames: Instead of time passed for both the delay and time value, the amount of frames that have
passed is used ex: {"useFrames":true}

onCompleteTarget: In C# if you are passing a String to the "onComplete" parameter, this variable allows you to define target to call the function than the game object you are tweening.

onUpdateTarget: The same as onCompleteTarget, but for the onUpdate function.

{"onUpdate":functionToCallOnUpdate,"onUpdateParam":hashTableToPassToOnUpdate}

orientToPath: When moving objects along a bezier curve, this controls whether the object aligns itself with the curve or not **repeat**: If you wish the loop to repeat set this value to something other than 1 **loopType**: If the loop is repeating you can change how it repeats (clamp by default) set this value to ping-pong: *ex*: {"repeat":2, "loopType":LeanTweenType.pingPong}

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Methods

Methods

LeanTween.alpha (gameObject:GameObject,to:float,time:float,optional:Hashtable) Int Defined in LeanTween.js:2204

Fade a gameobject's material to a certain alpha value. The material's shader needs to support alpha. Owl labs has some excellent efficient shaders.

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float Float
 The time with which to delay before callin the function
- time:float Float
 The time with which to delay before calling the function
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.alphaVertex (gameObject:GameObject, to:float, time:float, optional:Hashtable) Int Defined in LeanTween.js:2226

This works by tweening the vertex colors directly.

Vertex-based coloring is useful because you avoid making a copy of your object's material for each instance that needs a different color.

A shader that supports vertex colors is required for it to work (for example the shaders in Mobile/Particles/)

Parameters:

- gameObject:GameObject
 GameObject that you wish to alpha
- to:float Float

 The alpha value you wish to tween to
- time:float Float
 The time with which to delay before calling the function
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

```
LeanTween.cancel ( gameObject:GameObject , id:int )
Defined in LeanTween.js:1241
```

Cancel a specific tween for a gameObject

Parameters:

- gameObject:GameObject
 GameObject whose tweens you want to cancel
- id:int Int
 Id of the tween you want to cancel ex: var id:int = LeanTween.MoveX(gameObject, 5, 1.0);

```
LeanTween.cancel (ltRect:LTRect, id:int)
Defined in LeanTween.js:1256
```

Cancel a specific tween for a gameObject (GUI Methods)

Parameters:

- ltRect:LTRect LTRect
 LTRect whose tweens you want to cancel
- id:int Int
 Id of the tween you want to cancel ex: var id:int = LeanTween.rotate(ItRect, 180);

```
LeanTween.cancel (gameObject:GameObject)
Defined in LeanTween.js:1227
```

Cancel all tweens that are currently targeting the gameObject

Parameters:

gameObject:GameObject GameObject whose tweens you want to cancel

```
LeanTween.delayedCall (gameObject:GameObject, delayTime:float, callback:String,
optional:Hashtable) Int
Defined in LeanTween.js:2182
```

Call a function after a certain amount of time has passed

- gameObject:GameObject
 GameObject that you wish to call the Function on
- delayTime:float Float
 The time with which to delay before calling the function

- callback:String String
 Function that is called after the certain amount of time.
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.delayedCall (gameObject:GameObject,delayTime:float,callback:String) Int Defined in LeanTween.js:2170

Call a function after a certain amount of time has passed

Parameters:

- gameObject:GameObject
 GameObject that you wish to call the Function on
- delayTime:float Float
 The time with which to delay before calling the function
- callback:String String
 Function that is called after the certain amount of time.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.delayedCall (gameObject:GameObject, delayTime:float, callback:Function,
optional:Hashtable) Int
Defined in LeanTween.js:2152

Call a function after a certain amount of time has passed

Parameters:

- gameObject:GameObject GameObject
 Gameobject that you wish to tie this delayed function call to
- delayTime:float Float
 The time with which to delay before calling the function
- callback: Function Function
 Function that is called after the certain amount of time.
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Call a function after a certain amount of time has passed

Parameters:

- gameObject:GameObject GameObject
 Gameobject that you wish to tie this delayed function call to
- delayTime:float Float
 The time with which to delay before calling the function
- callback: Function Function
 Function that is called after the certain amount of time.

Returns:

```
LeanTween.delayedCall (delayTime:float, callback:Function) Int Defined in LeanTween.js:2120
```

Call a function after a certain amount of time has passed

Parameters:

delayTime:float Float
 The time with which to delay before calling the function

callback: Function Function
 Function that is called after the certain amount of time.

Returns:

Int: Returns an integer id that is used to distinguish this tween

```
LeanTween.init (maxSimultaneousTweens:int)
Defined in LeanTween.js:492
```

This line is optional. Here you can specify the maximum number of tweens you will use (the default is 400). This must be called before any use of LeanTween is made for it to be effective.

Parameters:

maxSimultaneousTweens:int Integer
 The maximum number of tweens you will use, make sure you don't go over this limit, otherwise the code will throw an error

Example:

LeanTween.init(800);

LeanTween.move (gameObject:GameObject,to:Vector3,time:float,optional:Hashtable) Int Defined in LeanTween.js:1802

Move a GameObject to a certain location

Parameters:

- gameObject:GameObject
 GameObject that you wish to move
- to:Vector3 Vector3
 The final positin with which to move to
- time:float Float The time to complete the tween in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Example:

Javascript:

LeanTween.move(gameObject, Vector3(0,-3,5), 2.0, {"ease":LeanTween.easeOutQuad});

C#

```
Hashtable optional = new Hashtable();
optional.Add("ease":LeanTweenType.easeOutQuad);
LeanTween.move(gameObject, Vector3(0f,-3f,5f), 1.5f, optional);
```

```
LeanTween.move (gameObject:GameObject,[],time:float,optional:Hashtable) Int Defined in LeanTween.js:1873
```

Move a GameObject along a set of bezier curves

Parameters:

■ gameObject:GameObject GameObject

Gameobject that you wish to move

■ [] Vector3 optional

A set of points that define the curve(s) ex: Point1, Handle1, Handle2, Point2,...

time:float Float

The time to complete the tween in

optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Example:

Javascript:

C#

Hashtable optional = new Hashtable();

optional.Add("ease":LeanTweenType.easeOutQuad);

optional.Add("orientToPath":true);

LeanTween.move(gameObject, new

Vector3{Vector3(0f,0f,0f),Vector3(1f,0f,0f),Vector3(1f,0f,0f),Vector3(1f,0f,1f)}, 1.5f, optional);

```
LeanTween.move (gameObject:GameObject,[],time:float,optional:Hashtable) Int Defined in LeanTween.js:1827
```

Move a GameObject along a set of bezier curves

Parameters:

- gameObject:GameObject
 GameObject that you wish to move
- [] Vector3 optional

A set of points that define the curve(s) ex: Point1, Handle1, Handle2, Point2,...

time:float Float

The time to complete the tween in

optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Example:

Javascript:

C#

Hashtable optional = new Hashtable();
optional.Add("ease":LeanTweenType.easeOutQuad);

optional.Add("orientToPath":true);

LeanTuran maya (gama Ohiost naw

 $Lean Tween. move (game Object,\ new$

 $Vector 3 \{Vector 3 (0f, 0f, 0f), Vector 3 (1f, 0f, 0f), Vector 3 (1f, 0f, 0f), Vector 3 (1f, 0f, 1f)\}, \ 1.5f, \ optional); \\$

```
LeanTween.move (GUI) (ltRect:LTRect, to:Vector2, time:float) Int Defined in LeanTween.is:1942
```

Move a GUI Element to a certain location

Parameters:

ltRect:LTRect LTRect LTRect object that you wish to move to:Vector2 Vector2

The final position with which to move to (pixel coordinates)

time:float Float

The time to complete the tween in

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.move (GUI) (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) Int Defined in LeanTween.js:1919

Move a GUI Element to a certain location

Parameters:

- ltRect:LTRect LTRect LTRect object that you wish to move
- to:Vector2 Vector2

 The final position with which to move to (pixel coordinates)
- time:float Float The time to complete the tween in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.moveLocal (gameObject:GameObject,to:Vector3,time:float,optional:Hashtable) Int Defined in LeanTween.js:1959

Move a GameObject to a certain location relative to the parent transform.

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:Vector3 Vector3
 The final positin with which to move to
- time:float Float The time to complete the tween in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.moveX (gameObject:GameObject, to:float, time:float, optional:Hashtable)
Defined in LeanTween.js:1741

Move a GameObject along the x-axis

- gameObject:GameObject GameObject Gameobject that you wish to move
- to:float FloatThe final position with which to move to
- time:float Float
 The time to complete the move in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.moveY (gameObject:GameObject , to:float , time:float , optional:Hashtable)
Defined in LeanTween.js:1760

Move a GameObject along the y-axis

Parameters:

- gameObject:GameObject
 GameObject that you wish to move
- to:float FloatThe final position with which to move to
- time:float Float The time to complete the move in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.moveZ (gameObject:GameObject , to:float , time:float , optional:Hashtable)
Defined in LeanTween.js:1779

Move a GameObject along the z-axis

Parameters:

- gameObject:GameObject GameObject Gameobject that you wish to move
- to:float FloatThe final position with which to move to
- time:float FloatThe time to complete the move in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.pause (gameObject:GameObject, id:int)
Defined in LeanTween.js:1285

Pause a specific tween for a gameObject

Parameters:

- gameObject:GameObject
 GameObject whose tweens you want to pause
- id:int Int
 Id of the tween you want to cancel ex: var id:int = LeanTween.MoveX(gameObject, 5, 1.0);

LeanTween.pause (gameObject:GameObject)
Defined in LeanTween.js:1305

Pause a specific tween for a gameObject

Parameters:

gameObject:GameObject
 GameObject whose tweens you want to pause

LeanTween.resume (gameObject:GameObject)
Defined in LeanTween.js:1339

Pause a specific tween for a gameObject

gameObject:GameObject
 GameObject whose tweens you want to resume

```
LeanTween.resume ( gameObject:GameObject , id:int )
Defined in LeanTween.js:1324
```

Pause a specific tween for a gameObject

Parameters:

- gameObject:GameObject GameObject
 GameObject whose tweens you want to resume
- id:int Int
 Id of the tween you want to resume ex: var id:int = LeanTween.MoveX(gameObject, 5, 1.0);

LeanTween.rotate (gameObject:GameObject,to:Vector3,time:float,optional:Hashtable) Int Defined in LeanTween.js:1545

Rotate a GameObject, to values that are in passed in degrees

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:Vector3 Vector3
 The final rotation with which to rotate to
- time:float Float The time to complete the tween in
- optional:Hashtable
 Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Example:

Javascript:

LeanTween.rotate(cube, Vector3(180,30,0), 1.5, {"ease":LeanTween.easeInOutQuad, "onComplete":finishedTweening});

C#:

Hashtable optional = new Hashtable(); optional.Add("ease":LeanTweenType.easeInOutQuad); optional.Add("onComplete":"finishedTweening"); optional.Add("onCompleteTarget":gameObject); LeanTween.rotate(cube, Vector3(180f,30f,0f), 1.5f, optional);

LeanTween.rotate (gameObject:GameObject,to:Vector3,time:float) Int Defined in LeanTween.js:1527

Rotate a GameObject, to values are in passed in degrees

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:Vector3 Vector3
 The final rotation with which to rotate to
- time:float Float The time to complete the tween in

Returns:

Example:

```
Javascript:
LeanTween.rotate(cube, Vector3(180,30,0), 1.5);
```

C#:

LeanTween.rotate(cube, Vector3(180f,30f,0f), 1.5f);

```
\textbf{LeanTween.rotate} \hspace{0.2cm} ( \hspace{0.1cm} \texttt{ltRect:LTRect} \hspace{0.1cm}, \hspace{0.1cm} \texttt{to:float} \hspace{0.1cm}, \hspace{0.1cm} \texttt{time:float} \hspace{0.1cm}, \hspace{0.1cm} \texttt{optional:Array} \hspace{0.1cm}) \hspace{0.2cm} \hspace{0.1cm} \hspace{0.1cm} \hspace{0.1cm} \texttt{Int} \hspace{0.1cm} \hspace{0.1cm} \hspace{0.1cm} \texttt{Defined in LeanTween.js:1581} \\
```

Rotate a GUI element (using an LTRect object), to a value that is in degrees

Parameters:

- ltRect:LTRect LTRect LTRect that you wish to rotate
- to:float Float
 The final rotation with which to rotate to
- time:float FloatThe time to complete the tween in
- optional:Array Array
 Object Array where you can pass optional items.

Returns

Int: Returns an integer id that is used to distinguish this tween

Example:

```
Javascript:
```

if(GUI.Button(buttonRect.rect, "Rotate"))
LeanTween.rotate(buttonRect4, 150.0, 1.0, ["ease",LeanTween.easeOutElastic]);
GUI.matrix = Matrix4x4.identity;

C#

$$\label{eq:continuous} \begin{split} & \text{if}(\text{GUI.Button}(\text{buttonRect.rect, "Rotate"})) \\ & \text{LeanTween.rotate(buttonRect4, 150.0, 1.0, new object[]{"ease",LeanTween.easeOutElastic});} \\ & \text{GUI.matrix} &= \text{Matrix} & \text{4x4.identity;} \end{split}$$

```
LeanTween.rotateAround (gameObject:GameObject,axis:Vector3,add:float,time:float,
optional:Hashtable)
Defined in LeanTween.js:1708
```

Rotate a GameObject in the objects around an axis

Parameters:

- gameObject:GameObject GameObject Gameobject that you wish to rotate
- axis:Vector3 Vector3The final rotation with which to rotate to
- add:float Float Rotate in x degrees
- time:float FloatThe time to complete the rotation in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.rotateLocal (gameObject:GameObject,to:Vector3,time:float,optional:Hashtable)
Defined in LeanTween.js:1687

Rotate a GameObject in the objects local space (on the transforms localEulerAngles object)

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:Vector3 Vector3
 The final rotation with which to rotate to
- time:float Float
 The time to complete the rotation in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.rotateX (gameObject:GameObject , to:float , time:float , optional:Hashtable)
Defined in LeanTween.js:1615

Rotate a GameObject only on the X axis

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float FloatThe final x-axis rotation with which to rotate
- time:float Float The time to complete the rotation in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.rotateX (gameObject:GameObject , to:float , time:float)
Defined in LeanTween.js:1604

Rotate a GameObject only on the X axis

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float Float
 The final x-axis rotation with which to rotate
- time:float FloatThe time to complete the rotation in

LeanTween.rotateY (gameObject:GameObject, to:float, time:float, optional:Hashtable)
Defined in LeanTween.js:1643

Rotate a GameObject only on the Y axis

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float FloatThe final y-axis rotation with which to rotate
- time:float Float
 The time to complete the rotation in
- optional:Hashtable Hashtable Hashtable where you can pass optional items.

LeanTween.rotateY (gameObject:GameObject , to:float , time:float)
Defined in LeanTween.js:1632

Rotate a GameObject only on the Y axis

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float Float
 The final y-axis rotation with which to rotate
- time:float Float
 The time to complete the rotation in

LeanTween.rotateZ (gameObject:GameObject , to:float , time:float)
Defined in LeanTween.js:1660

Rotate a GameObject only on the Z axis

Parameters:

- gameObject:GameObject
 GameObject that you wish to rotate
- to:float Float
 The final z-axis rotation with which to rotate
- time:float Float
 The time to complete the rotation in

LeanTween.rotateZ (gameObject:GameObject, to:float, time:float, optional:Hashtable)
Defined in LeanTween.js:1671

Rotate a GameObject only on the Z axis

Parameters:

- gameObject:GameObject GameObject Gameobject that you wish to rotate
- to:float Float
 The final z-axis rotation with which to rotate
- time:float Float
 The time to complete the rotation in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

LeanTween.scale (gameObject:GameObject,to:Vector3,time:float,optional:Hashtable) Int Defined in LeanTween.js:2007

Scale a GameObject to a certain size

Parameters:

- gameObject:GameObject GameObject Gameobject that you wish to rotate
- to:Vector3 Vector3 The size with which to tween to
- time:float Float
 The time to complete the tween in
- optional:Hashtable Hashtable
 Hashtable where you can pass optional items.

Returns:

```
 \begin{tabular}{ll} \textbf{LeanTween.scale (GUI)} & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & Int Defined in LeanTween.js:2027 & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & Int Defined in LeanTween.js:2027 & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & Int Defined in LeanTween.js:2027 & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & Int Defined in LeanTween.js:2027 & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & Int Defined in LeanTween.js:2027 & (ltRect:LTRect, to:Vector2, time:float, optional:Hashtable) & (ltRect:LTRect, to:Vector2, time:float, time:float,
```

Scale a GUI Element to a certain width and height

Parameters:

- ltRect:LTRect LTRect LTRect object that you wish to move
- to:Vector2 Vector2
 The final width and height to scale to (pixel based)
- time:float Float
 The time to complete the tween in
- optional:Hashtable Hashtable Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

Scale a GUI Element to a certain width and height

Parameters:

- ltRect:LTRect LTRect
 LTRect object that you wish to move
- to:Vector2 Vector2
 The final width and height to scale to (pixel based)
- time:float Float The time to complete the tween in

Returns:

Int: Returns an integer id that is used to distinguish this tween

Example:

```
Example Javascript:
var bRect:LTRect = new LTRect( 0, 0, 100, 50 );
LeanTween.scale( bRect, Vector2(bRect.rect.width, bRect.rect.height) * 1.3, 0.25 );
function OnGUI(){
   if(GUI.Button(bRect.rect, "Scale")){ }
}

Example C#:
LTRect bRect = new LTRect( 0f, 0f, 100f, 50f);
LeanTween.scale( bRect, new Vector2(150f,75f), 0.25f );
void OnGUI(){
   if(GUI.Button(bRect.rect, "Scale")){ }
}
```

Tween any particular value, it does not need to be tied to any particular type or GameObject

Parameters:

gameObject:GameObject GameObject
 GameObject with which to tie the tweening with. This is only used when you need to cancel this tween, it does not actually perform any operations on this gameObject

■ callOnUpdate:Function Function

The function that is called on every Update frame, this function needs to accept a float value ex: function updateValue(val:float){}

• from:float Float

The original value to start the tween from

to:float Float

The value to end the tween on

time:float Float

The time to complete the tween in

• optional:Hashtable Hashtable
The time to complete the tween in

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.value (gameObject:GameObject , callOnUpdate:Function , from:Vector3 , to:Vector3 ,
time:float , optional:Hashtable) Int
Defined in LeanTween.js:1465

Tween any particular value (Vector3), it does not need to be tied to any particular type or GameObject

Parameters:

- gameObject: GameObject
 GameObject that you wish to attach the tween to
- callOnUpdate:Function Function

The function that is called on every Update frame, this function needs to accept a float value ex: function updateValue(val:Vector3){}

• from: Vector3 Float

The original value to start the tween from

■ to:Vector3 Vector3

The final Vector3 with which to tween to

time:float Float

The time to complete the tween in

• optional:Hashtable Hashtable Hashtable where you can pass optional items.

Returns:

Int: Returns an integer id that is used to distinguish this tween

LeanTween.value (callOnUpdate:Function, from:float, to:float, time:float) Int Defined in LeanTween.js:1385

Tween any particular value, it does not need to be tied to any particular type or GameObject

Parameters:

callOnUpdate:Function Function

The function that is called on every Update frame, this function needs to accept a float value ex: function updateValue(val:float){} }

• from:float Float

The original value to start the tween from

to:float Float

The value to end the tween on

time:float Float

The time to complete the tween in

Returns:

Leaniween.value (gameobject:Gameobject,Cattonopoate:String,Trom:Vector3,to:Vector3,time:float,optional:Hashtable) Int
Defined in LeanTween.js:1502

Tween any particular value (Vector3), it does not need to be tied to any particular type or GameObject

Parameters:

- gameObject:GameObject GameObject
 Gameobject that you wish to attach the tween to
- callOnUpdate:String String

The function that is called on every Update frame, this function needs to accept a float value ex: function updateValue(val:Vector3){}

• from: Vector3 Float

The original value to start the tween from

• to:Vector3 Vector3
The final Vector3 with which to tween to

• time:float Float
The time to complete the tween in

• optional:Hashtable Hashtable Hashtable where you can pass optional items.

Returns: