

# uzLib.Lite

The Lite version of my paid uzLib (Unity3D) API used as dependency of my open-source repos.

## Contents

This API has an extensive list of methods to extend functionality of .NET Framework classes, WinForms, System.Console and Unity3D, also it contains own/third party implementation:

### List of interesting contents by namespaces

- uzLib.Lite.Core
  - Contains a Singleton implementation.
  - Contains a Console wrapper to read lines or keys at the same time. (ConsoleOutput class, method: ReadLineOrKey)
  - Inside of the Input namespace we can find some class that contains an implementation (SmartPsswrđ class) to read passwords in screen without displaying it (as expected).
- uzLib.Lite.Extensions
  - Contains some array/collection extensions (add element to an array, check if Dictionary/List/HashSet/IEnumerable is null or empty (IsNullOrEmpty), ForEach extensions to execute Action callbacks (included with index) (expanded on paid API), remove at index, DistinctBy...)
  - Contains some Dictionary extensions methods:
    - FindIndex (find item index by predicate)
    - GetIndex (get index of existing item, if not, returns -1)
    - AddOrSet (add value if key doesn't exists, if not update its value)
      - AddOrAppend (the same as before, but for List<T>/T[] as TValue)
    - AddAndGet (if key doesn't exist add it with specified value, then return it)
      - Get (the same as before, but force generic types with constraints to be classes (where TValue : class, new()))
      - SafeGet (try to get value if key exists if not returns default value (default(TValue)))
  - Contains some Bitmap extensions: get an IEnumerable of Colors from a Bitmap class or Save it to a path (or to a Stream (TODO)).
  - Contains some byte extensions: RoundOff method (to get a rounded byte)...
  - Contains some Color extensions: get threshold between two colors, compare color1 to get similar color from a IEnumerable of colors (2), posterize convolution, get percentage of similarity, round color...
  - Contains a method extension to compile \*.sln files...
  - Contains compression extensions: zip/unzip files from it's path, streams or objects (sync/async)...
  - Contains a CodeDOM extension to add static literal to new classes declared through CodeTypeDeclaration class.
  - Contains a DateTime extension to get its UNIX timestamp(in DateTime not DateTimeOffset class).
  - Contains a Exception extension to check if array/List/Dictionary specified index is out of bounds.
  - Contains Git extensions to get some data by using LibGit2Sharp library.
  - Contains HTML extensions to clean and find occurrences on HTML source code.
  - Contains IO exntensions to check valid paths, get file names from urls, get and check relatives paths patterns, check if path is a directory, get top level directories, go up in the tree (N times), get temporaly directories, check if directories are empty or null, delete folder contents...
  - Contains Net extensions to download files and make (GET) requests...
  - Contains a Object extension to check if object is casteable...
  - Contains a Process extension to run process asynchronously...
  - Contains Reflection extensions to invoke static/non-static methods, check if method exists in Assembly, run method by checking exceptions...
  - Contains Serialization methods to serialize/deserialize files/Streams/objects/byte arrays and to check if valid JSON/XML, etc...
  - Contains String extensions to check if strig is null or empty (no longer needed to use ...string.IsNullOrEmpty("example")...), format strings (the same logic), to change the first character from a string in uppercase...
  - Contains a URI extension to check if URL passed by string is valid.
  - Contains a Visual Studio extension to get the Startup project from a solution file...
- uzLib.Lite.Plugins.SymLinker
  - Contains a system to create symbolic links in Windows/Linux/Mac OSx...

- uzLib.Lite.Shells
  - Contains an obsolete GitShell (an self-implementation of Git funcionality before I discovered LibGit2Sharp...)
- uzLib.Lite.Unity.Extensions
  - Contains Animations extensions.
  - Contains Color extensions: Orange color (TODO: implement more colors), check if colors are similar, the distance between colors, get random colors, the same extensions from uzLib.Lite.Extensions.ColorHelper class (but adapted for Unity3D)...
  - Contains Geometry extensions to get random positions (Vector3), get average of Vector3s, get encapsuled bounds (this is an average of the bounds of all renderers of an GameObjects), getting the orthographic size to set in a camera to make this object fit perfectly on its view, get the offset from a model (getting the maximum and the minimum centers from the Renderers of a GameObjects), compare Vector3/Vector2 types to check if lesser or equal, greater or equal, lesser/greater than another Vector3/Vector2, get inverted Vector3/Vector2, get the ray from a camera center...
  - Contains Math extensions get the maximum absolute of an array of floats (params), getting the multiple of a float, check if float is between a range (exclusive/inclusive operation), set the "Y" parameter of a vector, get the distance from two Vector3/Vector2...
  - Contains Object extensions (GameObject/Transforms) to set layers, tags recursively, remove components recurisvely, find Transform parent by its name, get the topmost parent component, the components by name, get or add component in a GameObject (or throw exception/LogError), make child easily, safe destroy (check if Application.isEditor to execute DestroyImmediate instead), get GameObject path (dump hierarchy of childs into a string), send message to objects of selected type...
  - Contains Rect extensions to make PropertyDrawers implemenentation easier, check if rect is inside another rect, add padding to a rect, Clamp them...
  - Contains Texture extensions to write a text into a texture, get its width/height as a Vector2, create a texture from a color...
  - Contains UI extensions where are located some custom GUIStyles, get centered Rect, draw a Rect, draw a ProgressBar, centered label, draw Marquees...
- uzLib.Lite.Unity.Utils
  - Contains a GLDebug class to visualize Gizmos in-game.

## Setup

Need help? Just clone [this repository](#) into your Unity project or in your solution.

For documentation, just check the [Documentation API](#).

## Issues

Having issues? Just report in [the issue section](#). Thanks for the feedback!

## Contribute

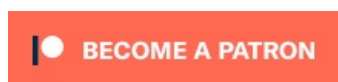
Fork [this repository](#), make your changes and then issue a pull request. If you find bugs or have new ideas that you do not want to implement yourself, file a bug report.

## TODO

- There are some methods missing from the text above.
- Change Safe word on methods and use Try.

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