User Guide for Reactor Developer Console

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1.2 RELEASE

For other releases please check GitHub.

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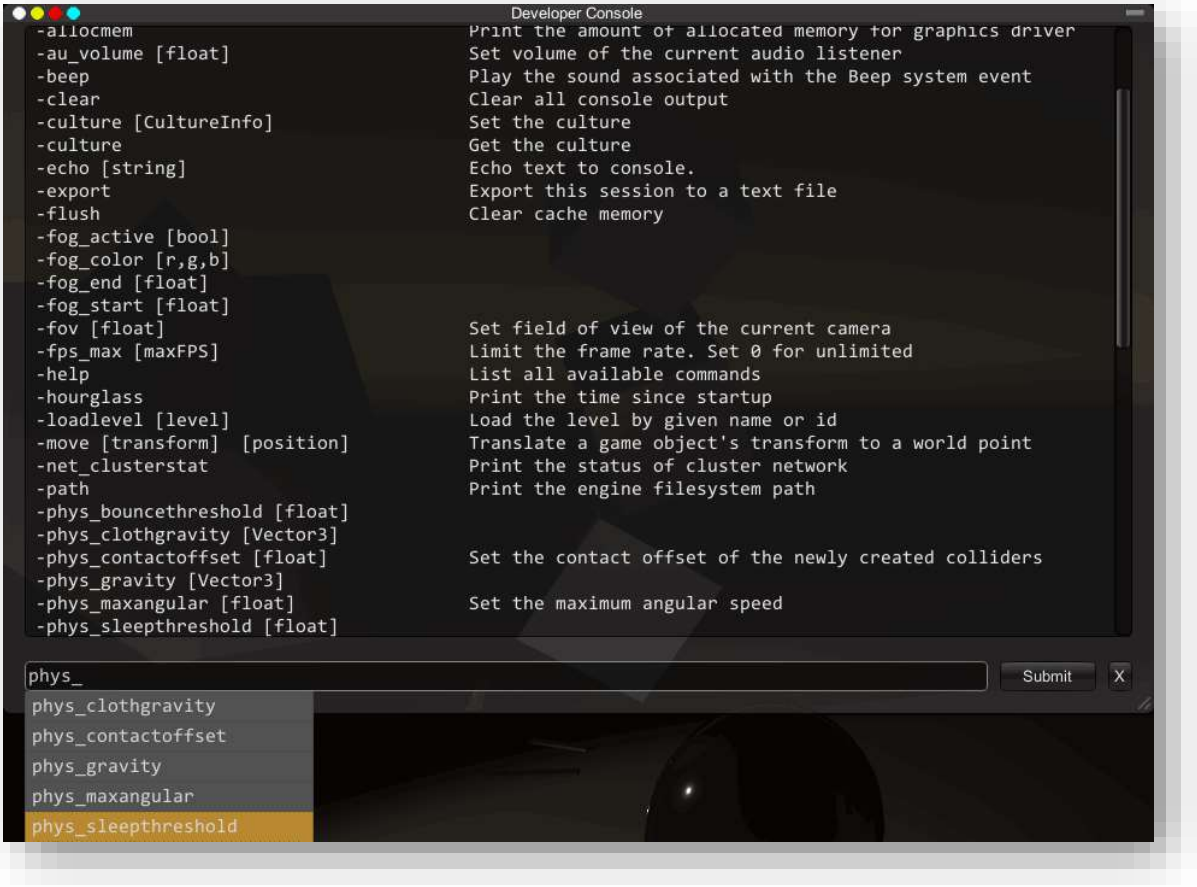
General Information of Software

Introduction

Reactor is a developer console for Unity 3D. Prints logs of the client and built-in Unity console, operates over the input given by the client and executes the related command with/without provided parameters. Filtering the output, input predictions and hints are operable.



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Package

Reactor asset package has 36 files.

- DeveloperConsole
- DeveloperConsole.prefab
- LICENSE
  - Core
    - Command.cs
    - Commands.cs
    - ConsoleUtility.cs
    - DeveloperConsole.cs
    - Widgets.cs
  - Fonts
    - CONSOLA.TFF
  - Misc
    - background-active.png
    - background-hover.png
    - background.png
    - button active.png
    - button hover.png
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    - Reactor-Default.guiskin
    - corner.png
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    - minus-active.png
    - minus-hover.png
    - minusbutton.png
    - network-hover.png
    - network.png
    - toggle-hover.png
    - toggle-normal.png
    - warning-hover.png
    - warning.png
  - SampleScene
    - ground.mat
    - transform.mat
    - transform.physicMaterial
    - SampleScene.unity
  - Widgets
    - ConsoleActivator.cs
    - StatsWidget.cs
    - WireframeWidget.cs

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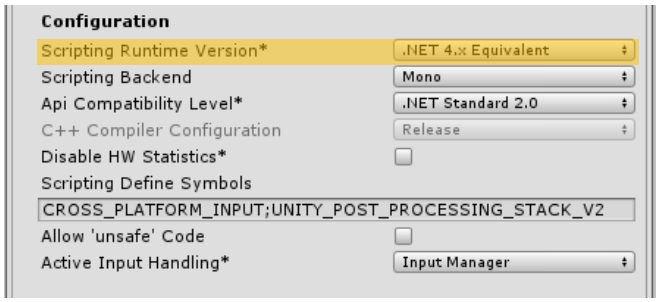
Installation

Before installation please check that you have the all files in your project.

This software supports Unity 2018.1 or later releases. If you are using an older version, problems may occur.

Make sure your project's scripting runtime version is **.NET 4.x Equivalent**.



1) **Open a Unity 3D 2018.1 or later project. (If you have got this asset from the Asset Store, skip to the third step)**
2) **Open a scene.**
3) **Open DeveloperConsole folder in Project view.**
4) **Find DeveloperConsole.prefab and drag it to your Hierarchy view.**

After completing this steps console will be ready. Run the scene, the console will open automatically. If you want to use the default F4 key for activating/disable the console, add ConsoleActivator.cs to the console game object. Otherwise, you can use DeveloperConsole.active for controlling the console.

If you are using Unity 2018 or an older release, some commands can be disabled.

	Unity 2019	Older
`phys_maxangular`	Available	Disabled
`phys_clothgravity`	Available	Disabled

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Anatomy

1) Filters

User can filter the output by clicking filter buttons located at the left upper corner. If the button has no color, that type of output is disabled.

Button	Output Type
-	User
-	System
○	Log
○	Warning
○	Error
○	Network

2) Close Button

Opens and closes the console window. On mobile, it doesn't disappear when the console window is closed. This behavior can be handled with `drawCloseButtonOnMobile`.

3) Output Box

The output will be printed in the output box. If the output is too long, the output can be scrolled.

4) Input Field

User can type commands here. Predictions and hints will be drawn in this field.

5) Submit Button

Submits the entry to the console.

6) Clear Button

Clears the output.

7) Resize Drag

Resizes the console window. This is disabled at mobile builds.

Mobile

Fullscreen mode is enabled on mobile builds.

Syntax

Reactor combines characters between brackets. You must use brackets for combining words.

```
move (Main Camera) (0,5,3)
```

Consider there are 2 invoke definitions `culture` & `culture [CultureInfo]`. The first one prints the current culture and the second one changes it.

Commands

Operates the logic and returns the output. A command can be invoked by submitting its query identity to the console. There can be 2 commands that have the same query identity. They called invoke definitions. Commands can have parameters. A command must have `[ConsoleCommand]` attribute. Usage of `[ConsoleCommand]` attribute is `[ConsoleCommand(string queryIdentity, string description)]`. For instance;

```
[ConsoleCommand("help", "List all available commands")]
class Help: Command
{

}
```

If a command is a cheat or only for developers, you can set that command as development build only by setting the third parameter `onlyAllovedOnDeveloperVersion` true.

```
[ConsoleCommand("invincibility", "Make player invincible",true)]
class Invincibility: Command
{
 //cheat here
}
```

Command Parameters

Command parameters are variables of command classes. A command parameter must have `[CommandParameter]` attribute and be public.

```
//Define command query identity, description and optionally for only developer
version mode
[ConsoleCommand("culture", "Set the culture", true)]
class CultureSet : Command]//Inherits class from Console.Command
    {
        [CommandParameter("CultureInfo")] //Add parameter for command
        public System.Globalization.CultureInfo value;

        public override ConsoleOutput Logic() //Virtual logic method for every
command,
        {
            base.Logic();
            var cultureInfo = value;//Command logic

        //Return console output with a message, output type and optionally
time signature
            return new ConsoleOutput("Culture is now "+ cultureInfo,
ConsoleOutput.OutputType.Log, false);

        }
    }
```

A command parameter's type must have a global definition. If there are multiple definitions, the optimal definition will be used to define.

Invoke Definitions

Two commands that have the same query identity must be separated. We can use the same query identity and create different usages.

```
help –List all available commands

help [command] – "Provide help information for a command."
```

Adding new commands

To add a new command you have to create a new class that inherits from `Console.Command` and attribute it with the `ConsoleCommand` attribute. Do not forget to make the parameter field public. Example proper command:

```
         [ConsoleCommand("culture", "Get the culture")]
        class CultureGet : Command
    {
                //No parameters
        public override ConsoleOutput Logic()
        {
            base.Logic();
            var oldCulture =
System.Globalization.CultureInfo.CurrentCulture.Name;

            return new ConsoleOutput("Culture is " + oldCulture,
ConsoleOutput.OutputType.Log, false);

        }
    }
```

1) Create a new C# script.

```
using System;
using UnityEngine;

public class MyCustomCommands
{

}
```

2) Add `using Console;` to top of your script.

```
using System;
using UnityEngine;
using Console;

public class MyCustomCommands
{

}
```

3) Create a new class that inherits from `Command` class.

```
public class MyCustomCommands
{
     class MyMultiplyCommand: Command
    {

    }
}
```

4) Insert `ConsoleCommand` attribute to your command.

```
public class MyCustomCommands
{
     [ConsoleCommand("multiply", "Multiply two numbers.")]
     class MyMultiplyCommand: Command
    {
    }
}
```

5) Override the `ConsoleOutput Logic()` method and program your command's behavior.

```
public class MyCustomCommands
{
     [ConsoleCommand("multiply", "Multiply two numbers.")]
     class MyMultiplyCommand: Command
    {
     public override ConsoleOutput Logic()
     {
       var result = 5 * 3;
       return new ConsoleOutput("Result is " + result,
ConsoleOutput.OutputType.Log);

      }
    }
}
```

6) To add parameters, use `CommandParameter` attribute.

```
public class MyCustomCommands
{
     [ConsoleCommand("multiply", "Multiply two numbers.")]
     class MyMultiplyCommand : Command
    {
     [CommandParameter("firstParameterDescription")]
     public int i;
     [CommandParameter("secondParameterDescription")]
     public int j;
     public override ConsoleOutput Logic()
     {
       var result = i * j;
       return new ConsoleOutput("Result is " + result,
ConsoleOutput.OutputType.Log);

      }
    }
}
```

Your command is ready to use. You can type `multiply 5 10` to console. It will print 50.

Support

If you are having an issue, please check the forum and please report to issue tracking.

You can contact me at mustafa.yaya@outlook.com.tr

Licenses

Reactor Developer Console

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