ProjectView+

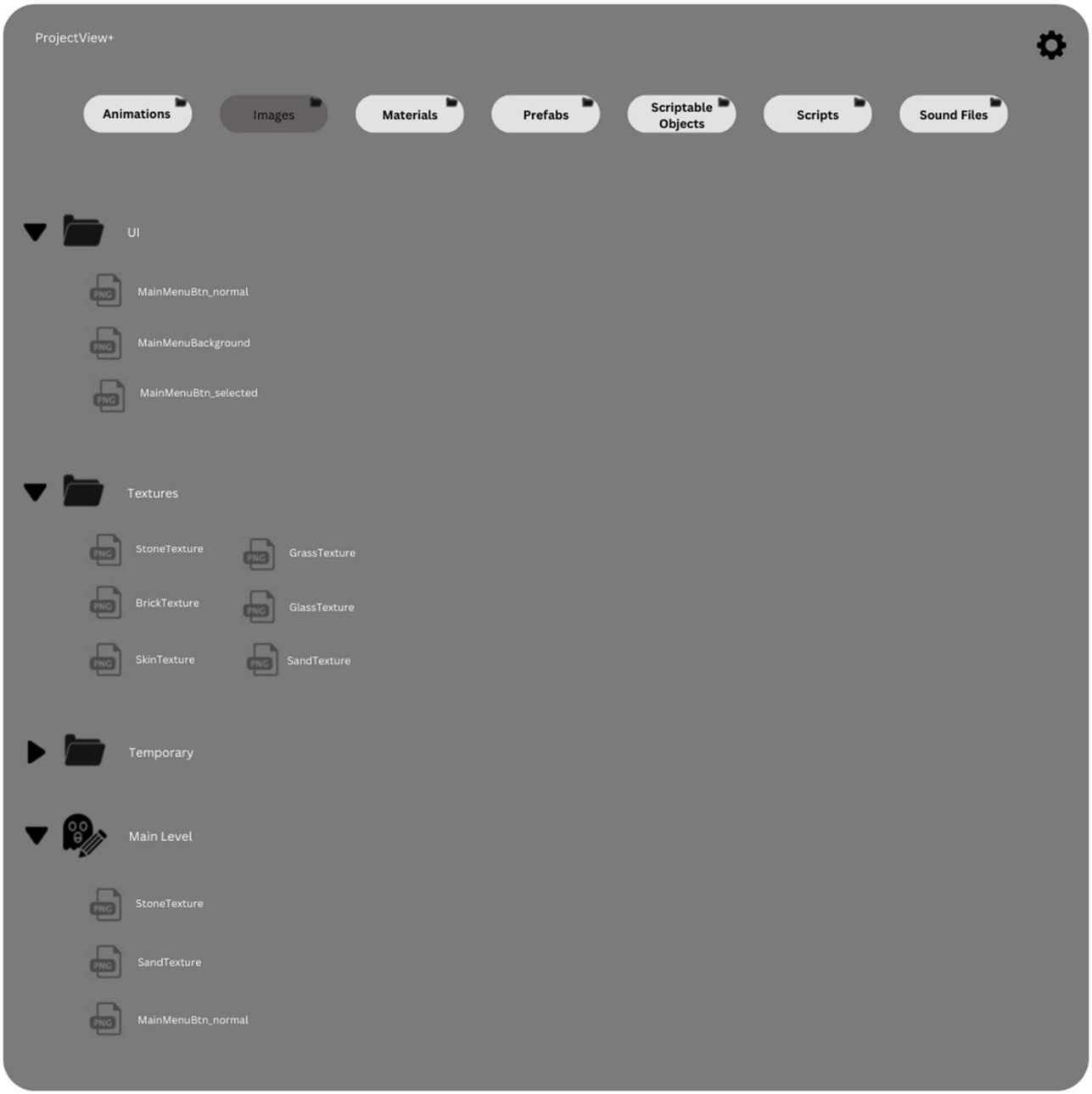
Table of contents

Overview 2
General Idea 2
File 3
Folder 3
Ghost Folder 3
Fold-Out Icon 3
Tabs 4
Settings 4
Filters 5
Context Menu 6
Create ghost folder 6
Folder settings 6
Scriptable Objects 7
Show in table view 7
Compare to average 7
Software Architecture 8
Tasks 9
Supported Platforms 10
Versioning 10
Third Party Links 10
For the future 10
Filter Settings 10
Cutting out features 11

Overview

General Idea

ProjectView+ will be a tool that helps Unity game developers speed up the development process of their game by adding a new menu item to the menu bar called “ProjectView+”. Clicking on this menu item opens a new window. Just like the name of the tool suggests this window is going to be a better version of the project view. On the top of the window there will be 8 tabs that represent 8 predefined folders with filters attached to them for the (in my opinion) most commonly used asset types in Unity:



Let’s take a closer look at each of these symbols and explain what they do.

File

Files will be able to be selected with the mouse. Selected files have a different background and show the standard inspector view in the inspector window. The user can drag and drop files into the folders.

Folder

The folders in ProjectView+ are the same folders that you would use in the normal project view (or in the file explorer). They represent a directory on the computer. Folders are capable of having ***filters*** attached to them.

Ghost Folder

Ghost folders act like folders in the ProjectView+ window but don’t actually represent a directory/folder. That is why they are called ghost folders; they don’t exist outside of the ProjectView+ tool. This has certain advantages: In the mockup above you can notice how the ghost folder has child files that are already children of different folders but since the ghost folder isn’t changing the path of these files there is no conflict. You can also think of it this way: the ghost folder just stores references to files or folders. Ghost folders are capable of having ***filters*** *attached to them.*

Fold-Out Icon

Just like you’re used to in the regular project view folders and ghost folders can either be folded or fold-out which means they either don’t or do show their child files and folders.

Arrow pointing to the right: folded

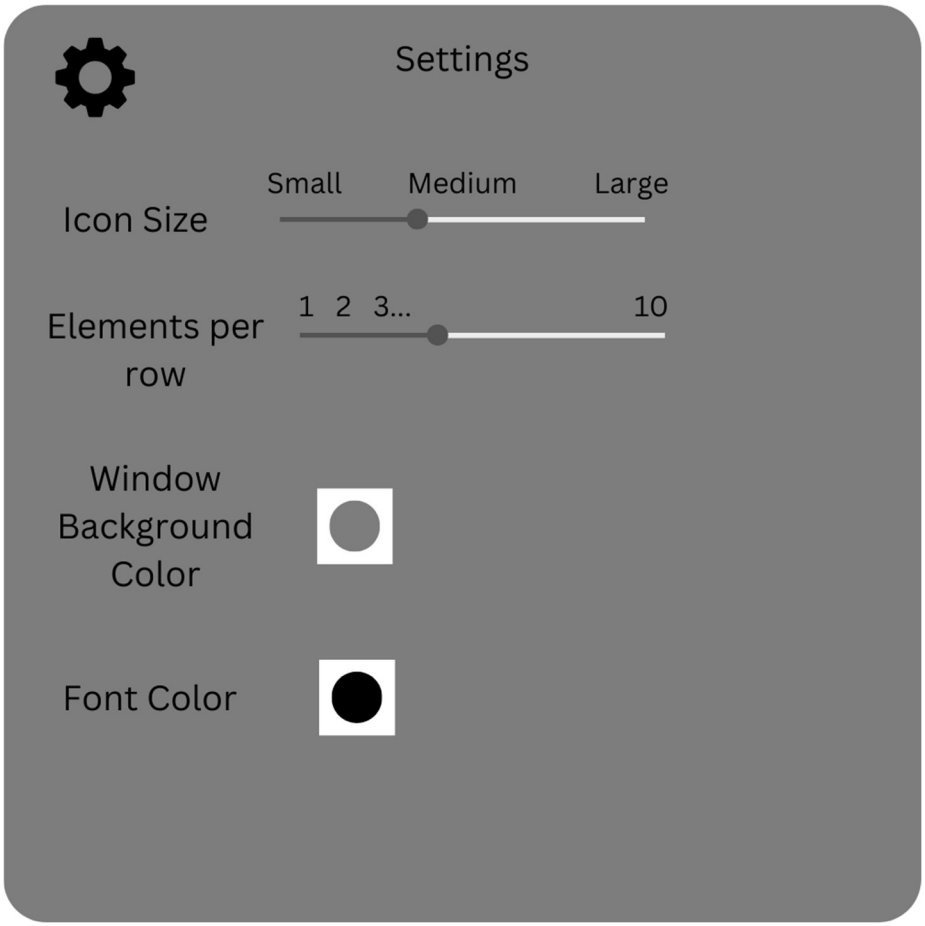
Arrow pointing to the bottom: fold-out

Tabs

Tabs are a different way to display folders or ghost folders. Parent folders have the option to display their child folders as tabs. When doing so one tab will be reserved for all the files that were in the folder. The small icon on the top right tells you if it's a folder or a ghost folder. If the tab hast a darker background it means it is selected. The user only sees the files and folders of the selected tab or if you want to think of it in terms of folders: The currently selected tab is fold-out and the others are folded.

Settings

A click on the settings icon opens the settings window where the user can change the look of the tool with settings like icon-size, how many files/folders there should be per row etc.



Filters

Every folder can have one or more filters attached to it. The user will have the ability to create his own filters. A filter could for example look something like this:

“I want assets of type Scriptable Object but only those whose name has “data” in them.”

This would translate to this :”data t:ScriptableObject”.

All files that are found by the filter will automatically be made children of the folder that has the filter attached to it. If a file is already a child of a different folder other than the root folder (asset folder) the user will get a popup warning asking him if he wants to move the file.

For now, the user has to write the filters manually. I will put the only piece of documentation I have found for the different filter options in the filter settings window.

Context Menu

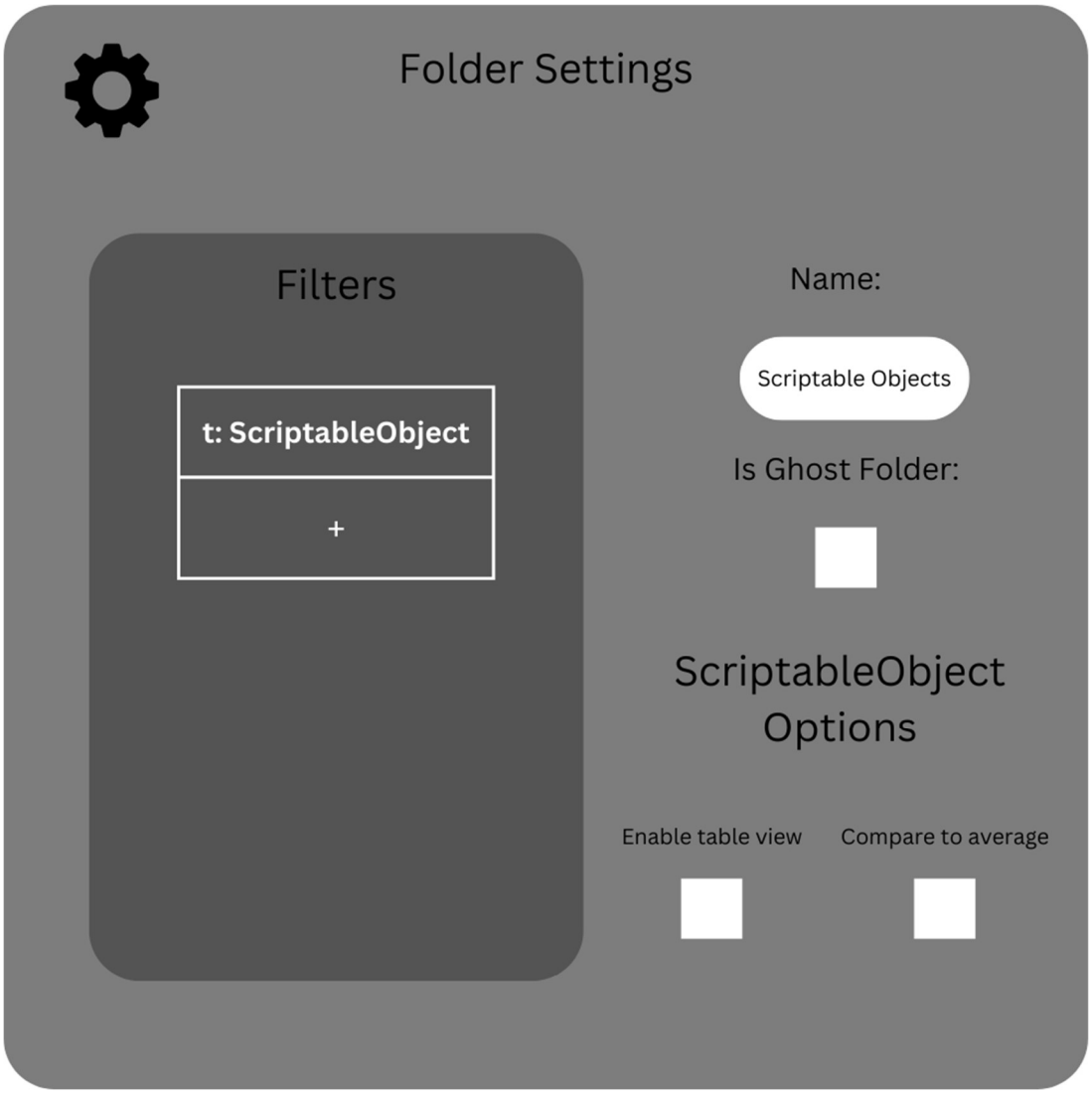
When the user right clicks a file, folder or empty space in the ProjectView+ window the standard context menu should appear like it would in the standard Project View. The context menu will have a new category called “ProjectView+”. Inside this category there will be new options:

Create ghost folder

Clicking on this option creates a new ghost folder inside the ProjectView+ window.

Folder settings

This option only appears if you right click on a folder. It opens the folder settings window for the folder that has been right-clicked.



Scriptable Objects

*For Scriptable Objects there will be extra folder options: "**Show in table view**" and "**Compare to average**".*

Show in table view

*When the option "**Show in table view**" is activated, the Scriptable Objects will show up in a table view where all their serialized properties are directly listed. This should make adjusting stats of characters, items, weapons and changing dialogues easier for the developers.*

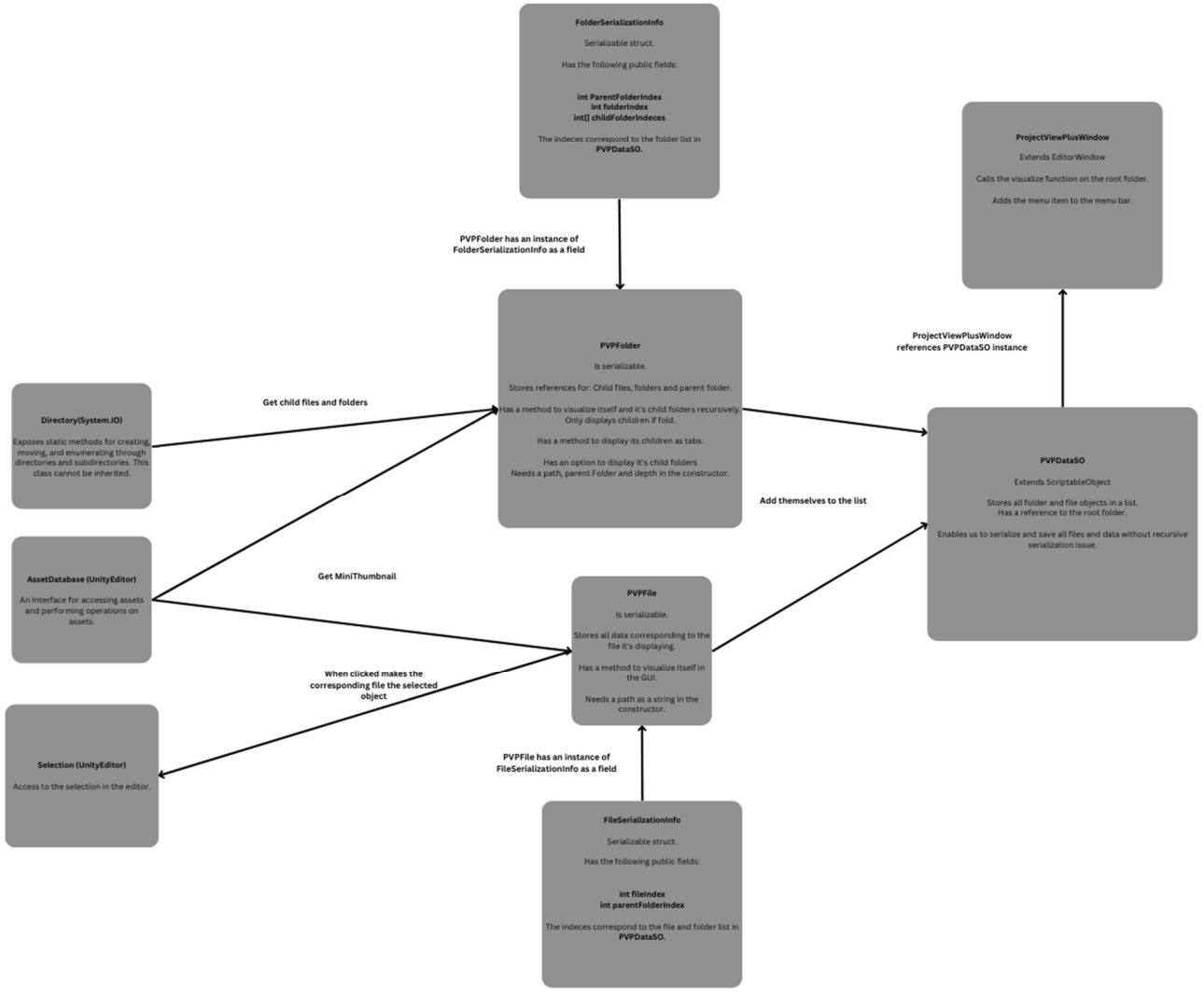
Name: *Pikachu*	***Attack:*** *90*	***Sp.Attack:*** *60*	***HP:*** *60*
Name: *Porygon*	***Attack:*** *40*	***Sp.Attack:*** *80*	***HP:*** *90*
Name: *Latios*	***Attack:*** *60*	***Sp.Attack:*** *120*	***HP:*** *100*

Compare to average

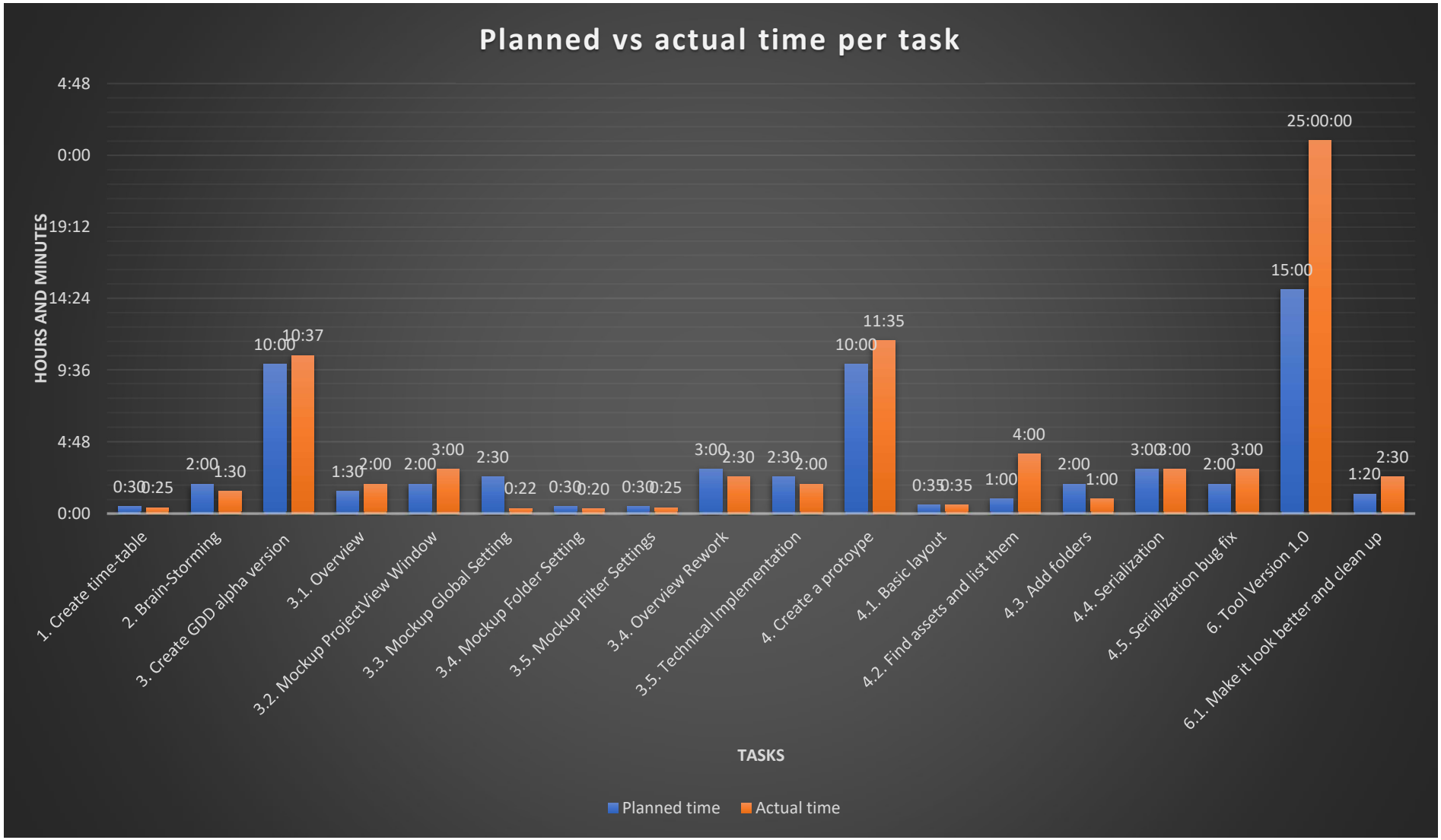
*When the option "**Compare to average**" is activated the table view displays a percentage next to every property that is a number value type like float, int, ulong etc. The percentage is indicating how many percent the value of the property is greater or smaller compared to the average value of the same property across all Scriptable Object Instances. This will be especially useful for balancing large amounts of characters, weapons etc.*

Name: *Pikachu*	***Attack:*** *90*	***+42.1%***	***Sp.Attack:*** *60*	***-30.7%***	***HP:*** *60*	***-28%***
Name: *Porygon*	***Attack:*** *40*	***-36.8%***	***Sp.Attack:*** *80*	***-7.7%***	***HP:*** *90*	***+8%***
Name: *Latios*	***Attack:*** *60*	***-5.2%***	***Sp.Attack:*** *120*	***+38.4%***	***HP:*** *100*	***+20%***

Software Architecture



Tasks


Planned vs actual time per task
HOURS AND MINUTES
4:48
0:00
19:12
14:24
9:36
4:48
0:00
0:30
0:25
2:00
1:30
10:00
10:37
1:30
2:00
2:00
3:00
2:30
0:22
0:30
0:20
0:30
0:25
3:00
2:30
2:30
2:00
10:00
11:35
0:35
0:35
1:00
4:00
2:00
1:00
3:00
3:00
2:00
3:00
15:00
25:00:00
1:20
2:30
1. Create time-table
2. Brain-Storming
3. Create GDD alpha version
3.1. Overview
3.2. Mockup ProjectView Window
3.3. Mockup Global Setting
3.4. Mockup Folder Setting
3.5. Mockup Filter Settings
3.4. Overview Rework
3.5. Technical Implementation
4. Create a prototype
4.1. Basic layout
4.2. Find assets and list them
4.3. Add folders
4.4. Serialization
4.5. Serialization bug fix
6. Tool Version 1.0
6.1. Make it look better and clean up
TASKS
Planned time
Actual time

Supported Platforms

The tool supports all platforms that unity is available on right now. Which means Windows, macOS, and the Linux platform.

Versioning

This project is versioned with GitHub. Link to the repository : https://github.com/MyNameIsDylan99/overview-tool

Third Party Links

- Initial inspiration: https://www.youtube.com/watch?v=iSRHG3AitvA
- File and folder system: https://medium.com/@furkancaglayan15/how-to-create-your-own-project-view-in-unity3d-9a62ef3eba91
- Icons: https://www.flaticon.com/
- Background music user manual :
  Good For You by THBD https://soundcloud.com/thbdsultan
  Creative Commons — Attribution 3.0 Unported— CC BY 3.0 Free Download / Stream: http://bit.ly/2PgU6Mu

  Music promoted by Audio Library https://youtu.be/-K_YSjqKgvQ

For the future

Filter Settings

To make the tool more user-friendly there will be a decent but not overwhelming amount of filter options like asset types and file endings that the user can select in a checkbox like manner. For more advanced users there will also be an option to manually add filters in a string format like in the example before. There will also be different sorting options for how the files within the tab will be sorted.

Cutting out features

A lot of features that I have planned didn't quite make it into my submission. The reason for this was my underestimation of the time I would need for the other things. This includes, serialization of all files and folders, making them selectable and keeping the correct order of all the indices when drag and dropping, deleting and creating. Having to make my own context menu with a function for each option.

So I decided to cut out many features and focus on the basic functionality of the tool and tried to make sure that the things that are included work flawlessly.

All the features that are in *italic* formatting are excluded from the final product and will be considered for future.