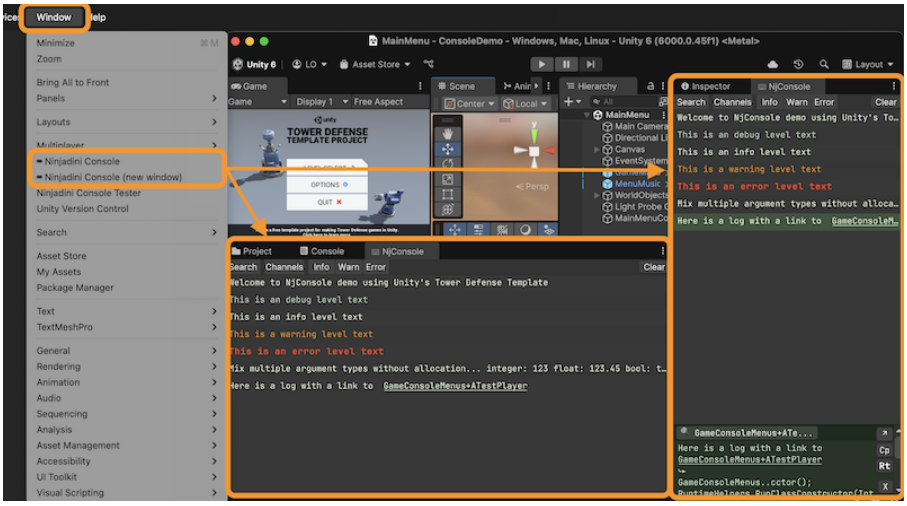
Getting started with Ninjadini Debug Console

Open console window in editor

- `Windows > Window/⌨ Ninjadini Console`
- You can open multiple windows by choosing (new window) option.



Open console in game view

- With keyboard: default trigger is `` ` `` key (Top left button on US keyboard).
- With mouse: Hold for 3 seconds at top left part of game screen.
- With mouse: Tap 3 times at the top left corner of game screen.

All of the above can be customized in project settings > Ninjadini ⌨ Console
There, you may also want to set up a passphrase prompt to deter unauthorized users from reaching the console by accident.

NjLogger

Unlike Debug.Log, which allocates memory and produce expensive stack trace strings, NjLogger:

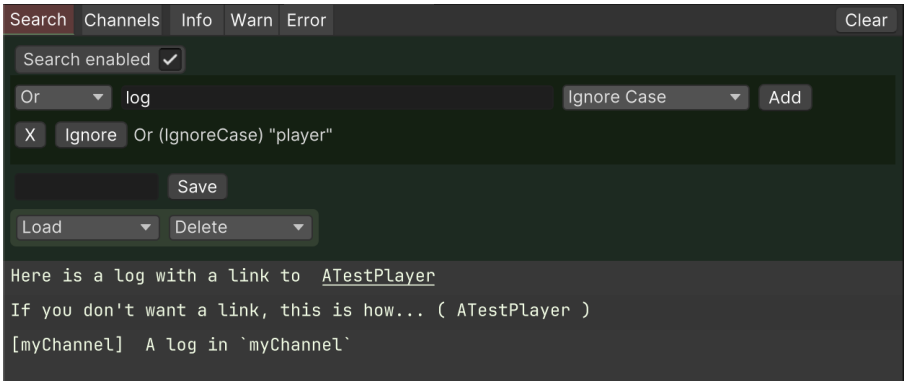
- Avoids GC pressure with zero-allocation argument formatting
- Integrates seamlessly with NjConsole (filtering, channels, and object inspection)

```
NjLogger.Debug("This is an debug level text");
NjLogger.Info("This is an info level text");
NjLogger.Warn("This is a warning level text");
NjLogger.Error("This is an error level text");

NjLogger.Info("Mix multiple argument types without allocation... integer:", 123, "float:",
123.45f, "bool:", true);

var aTestObj = GetTestPlayerObj();
NjLogger.Info("Here is a log with a link to ", aTestObj.AsLogRef());
NjLogger.Info("If you don't want a link, this is how... (", aTestObj?.ToString(), ")");
```

```
static readonly LogChannel channel = new LogChannel("myChannel"); // this should be at class level

channel.Info("A log in `myChannel`");
channel.Warn("A warning in `myChannel`");
```

Logs from Debug.Log() will still come through to console (default setting).

Log filtering



- Filter by Text Search
  You can add multiple conditions...
  - `And` operator: Must match to pass filter
  - `Or` operator: Must match at least one of the conditions that also have `Or` operator.
  - `Not` operator: Must not match to pass filter
- Filter by Channels
  - [*] See all logs - no filtering
  - [-] See logs with no channel
- Filter by Levels (Info, Warn, Error)

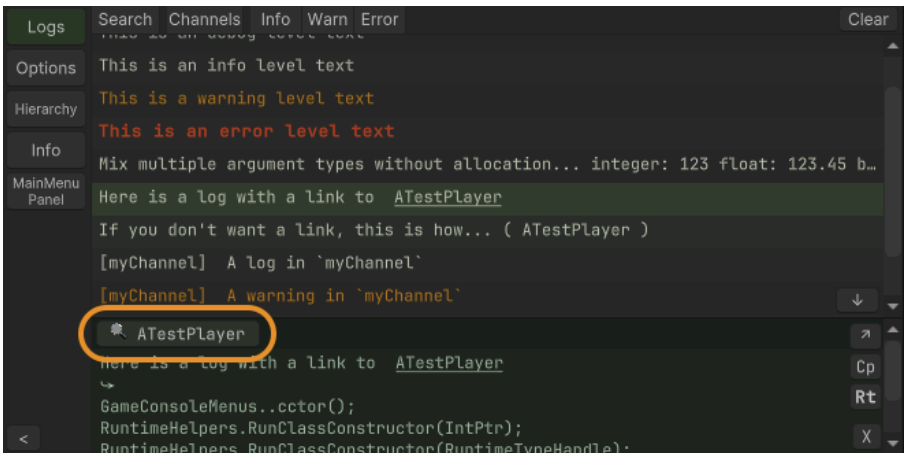
Logs object linking

You can link and print an object to console.

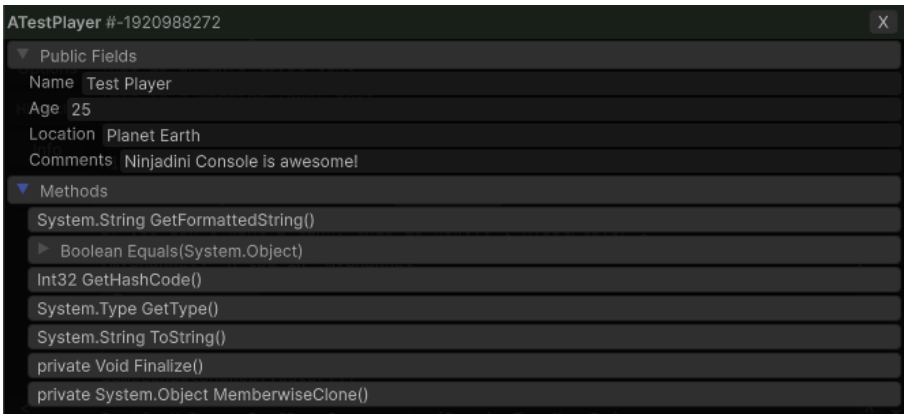
```
var aTestObj = GetTestPlayerObj();
NjLogger.Info("A simple object link:", aTestObj);
NjLogger.Info("Here is a link to", aTestObj.AsLogRef(), "mixed in multiple arguments");
```

> Object links are weak referenced, so they will not leak memory over time. You may sometimes have the opposite problem where when you click the object it is already garbage collected. In such cases where you need a strong ref for the duration of the log's lifetime (the age of the log ring), use this instead: `NjLogger.Info("A strong object link:", aTestObj.AsStrongLogRef());`

A button will show up when you click on the log in console



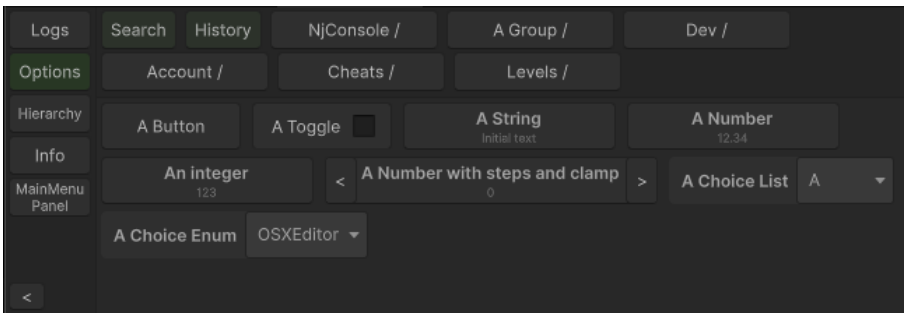
You can then inspect the object and modfiy the values via that link.



> Object inspector's primary purpose is to allow you to debug things easily but it does not fully support modifying every data (yet).

> Object links are weak referenced, so they will not leak memory over time. You may sometimes have the opposite problem where when you click the object it is already garbage collected. In such cases where you need a strong ref for the duration of the log's lifetime (the age of the log ring), use this instead: `NjLogger.Info("A strong object link:", aTestObj.AsStrongLogRef());`

Options menu / cheats



First create a catalog

`ConsoleOptions.Catalog catalog = NjConsole.Options.CreateCatalog();`

Catalogs are useful because when you no longer need a set of option menus, you can just call `catalog.RemoveAll()`.

Add a button

```
catalog.AddButton("My First Button", () => Debug.Log("Clicked my first button"));

// directory / folder
catalog.AddButton("A Directory / Child Directory / Child Button", () => Debug.Log("Child
button was clicked"));

// key binding
catalog.AddButton("My Space Key Bound Button", () => Debug.Log("Clicked my Space key bound
button"))
        .BindToKeyboard(KeyCode.Space);

// auto close
catalog.AddButton("My auto close button", () => Debug.Log("Auto close button clicked"))
        .AutoCloseOverlay();
```

Add a toggle

```
var toggle1 = false;
var toggle2 = false;

catalog.AddToggle("My First Toggle", () => toggle1, (v) => toggle1 = v);

// directory + key binding + auto close
catalog.AddToggle("A Directory / My T key Bound Toggle", () => toggle2, (v) => toggle2 = v);
        .BindToKeyboard(KeyCode.T)
        .AutoCloseOverlay();
```

> Both buttons and toggles can be bound to a keyboard key via `...BindToKeyboard(KeyCode.Space)`.
> Shift + Ctrl + E style combo can be done via `...BindToKeyboard(KeyCode.E, ConsoleKeyBindings.Modifier.Shift | ConsoleKeyBindings.Modifier.Ctrl)`.
>
> Set console overlay to auto close after you press the button via `...AutoCloseOverlay()`.
> Warning, only a 1 keybinding per item.

Add number prompt

```
var aFloat = 12.34f;
catalog.AddNumberPrompt("A Number", () => aFloat, (v) => aFloat= v);

// clammped in number
var int0To100 = 50;
catalog.AddNumberPrompt("0 to 100", () => int0To100, (v) => int0To100 = Mathf.Clamp(v, 0,
100));
```

```
// Number prompt with left and right step buttons
var steppedNumber = 10;
catalog.AddNumberPrompt("Stepped number", () => steppedNumber, (v) => steppedNumber = v, 5);
```

Add text prompt

```
var text = "Initial text";
catalog.AddTextPrompt("My Text Prompt", () => text, (v) => text = v);

// Text prompt with submission validation and input restriction
var text2 = "Initial text";
catalog.AddTextPromptWithValidation("My validated text",
  getter: () => text2,
  setter: v => {
        if(v.All(char.IsUpper)) // in this example we only accept capital letters
        {
                text2 = v;
                return true; // return true to accept the input and close the prompt.
        }
        return false; // Return false to block user from closing the dialog due to invalid
value.
  },
  validator: (v) => {
        if (v.Length > 5) v = v.Substring(0, 5); // Trim out invalid characters (or length)
and return the valid version (optional)
        return v;
  } );
```

Add choice list dropdown

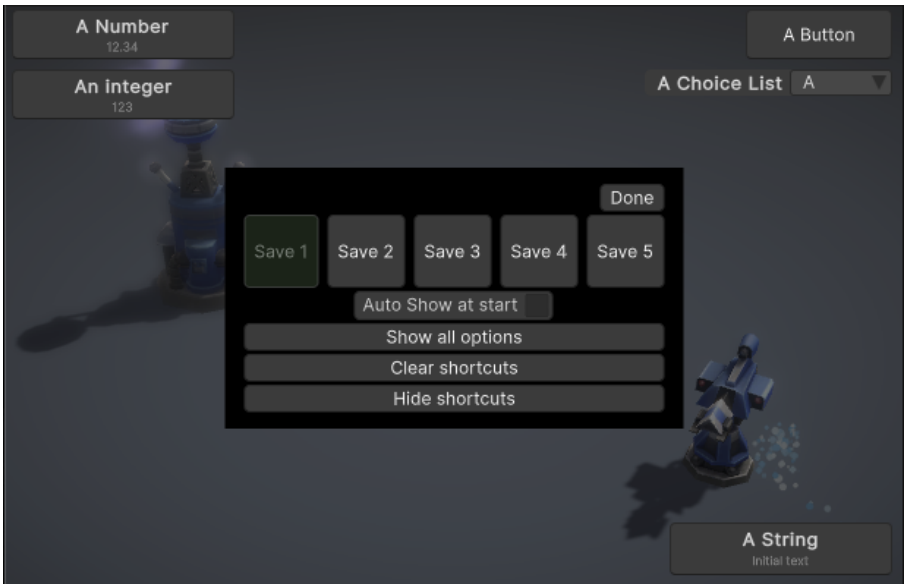
```
var choices = new List<string>() { "A", "B", "C", "D" };
var index = 0;
catalog.AddChoice("A Choice List", choices, () => index, (v) => index = v);

// An enum choice:
var platform = RuntimePlatform.OSXEditor;
options.AddEnumChoice("A Choice Enum", () => platform, (v) => platform = v);
```

> Remember to categorize menu options into groups so that it is easier to find. `catalog.AddButton("A Directory / Child Directory / Child Button", () => Debug.Log("Child button was clicked"));`

Options menu for edit mode

Shortcuts

You can press and hold on any of the options items or the folder to create a shortcut outside of console window. Shortcuts feature is for runtime overlay mode only.



Items will be placed to alignment zones based on where your mouse is. For example, you can align items along top left filling towards right. or top left filling towards bottom. Same with other corners.

Once you drop your frist item, you will be left in a shorcut edit mode:

- You an now move existing items by just drag and drop without holding down
- Swith between different short cut saves 1-5.
- Set up whather shortcuts should `Auto show at start` (default is off)
- Shortcuts will appear a disapper to match the state of options menu - as you add and remove buttons based on different game states
- If you `hide shortcuts`, you can go back to shortcut edit mode via Console > Options > Show Shortcuts.

End of basics

See other doc pages for more advanced topics such as:

- Creating options menu for edit mode
- creating custom panels
- Build time customization (such as turning off features for specific build types)
- Customize log timestamp output format
- Accessing log history and custom log handlers
- Custom shortcut style overlay like FPS monitor
- Customize access challenge

See table of content based on latest version here:
https://github.com/Ninjadini/NjConsoleDocs/blob/main/README.md