KUGLE

The official Litepaper

Preface

Kugle is a game project initiated by a group of friends without pretention.

We using it to learn more about Solana, and Blockchain in general.

Solana technology can secure sensibles datas of our game, and give us the chance to be independant & totally transparent.

We are using all our skills and ideas to work hard and make our dream true.

1.Casual game open to anyone

Kugle app game run on smartphone, full 3D build on Unity and Blender, smooth graphism and colored world.

Inspiration sources are "Mario Galaxy" , "Tamagotchi" and naturally "Cryptokitties".

The accent is on three major gameplay elements :

- Tamagotchi side, mollycoddle day after day.
- Missions, balanced to be difficult but accessible by anyone.
- Reproduction, insanelly high number of possibilities.

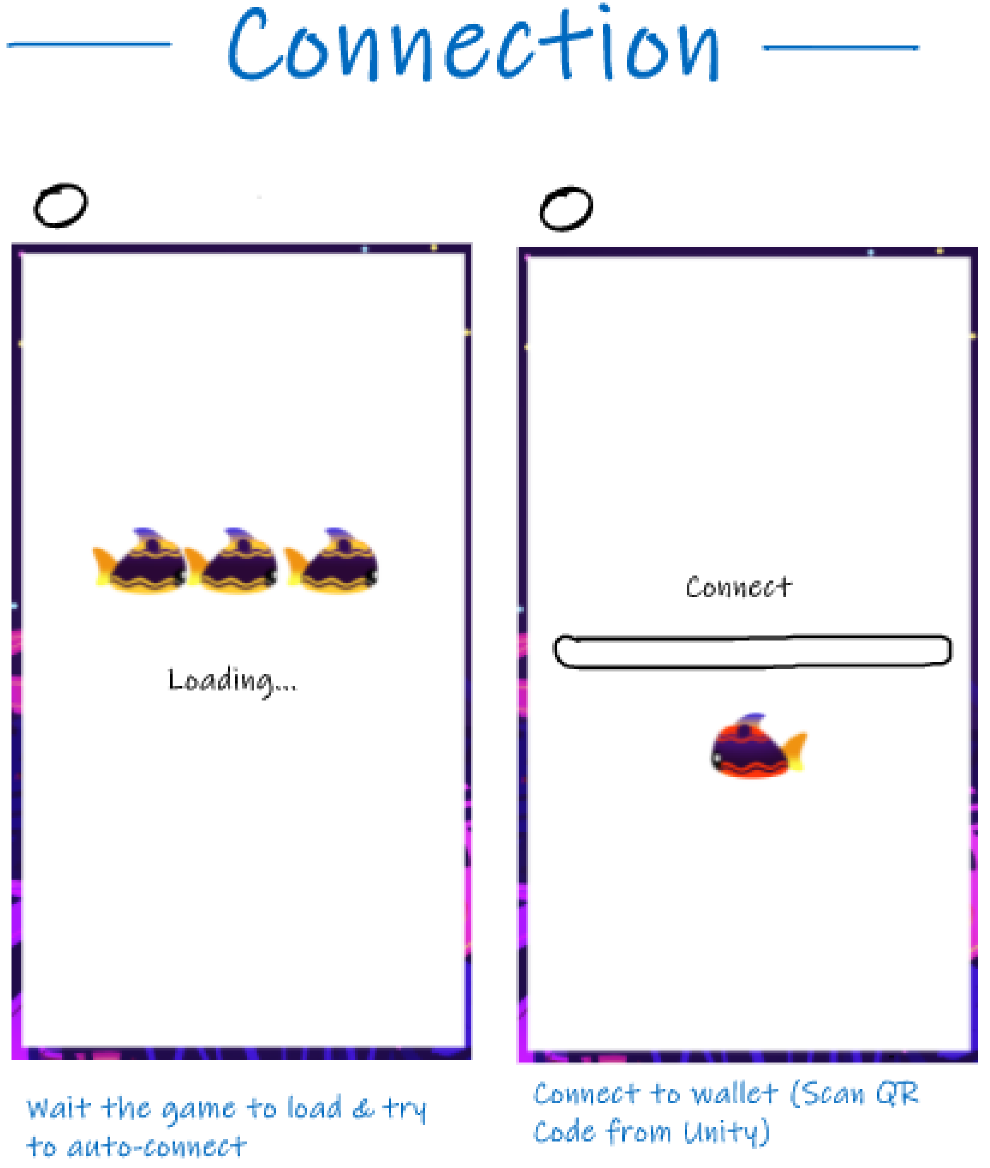
In the game, when player have one or more egg(s), aquired by simple purchase, airdrop, reproduction, or friend gift : he can start to playing by hetching the egg.

After hatching a little Kugle emerge and need attention to grow in a safe place.

Daily missions drop your Kugle in space plateforme world, where player can find resources like food, carbon dioxyde and more…

But Space is dangerous place, monsters want to eat the delicious Kugle flesh !

Mobile APP Vertical slice

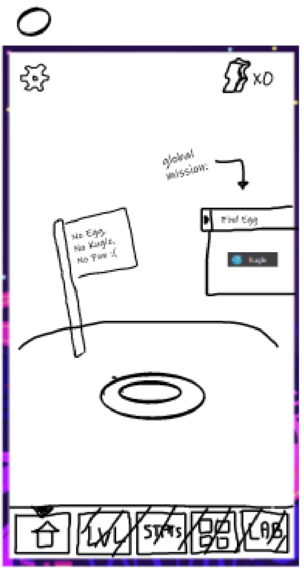


Connection

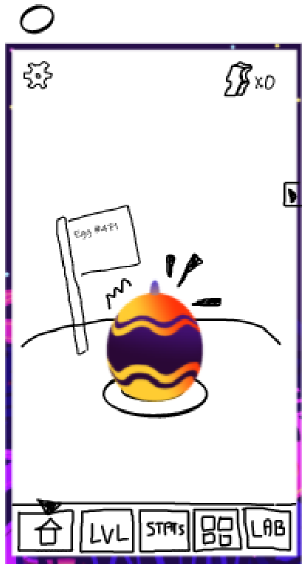
Wait the game to load & try to auto-connect

Connect to wallet (Scan QR Code from Unity)

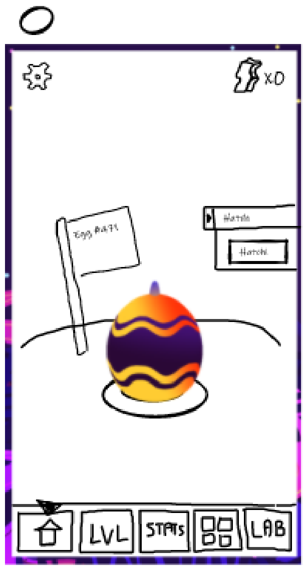
Eclosion



No Egg/Kugle, no acces to anything

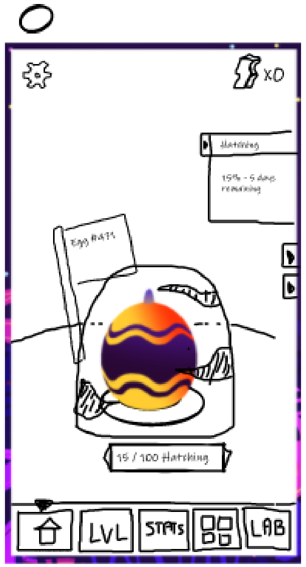


Egg display, animate when ready to be Hatched!

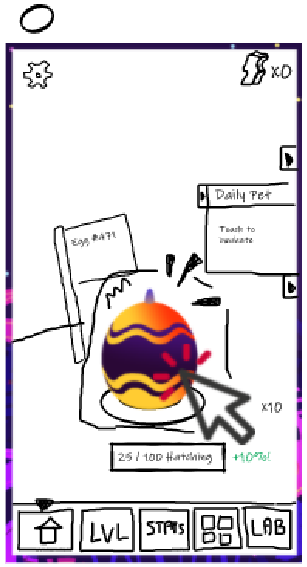


Hatch action: put the egg in Hatching state

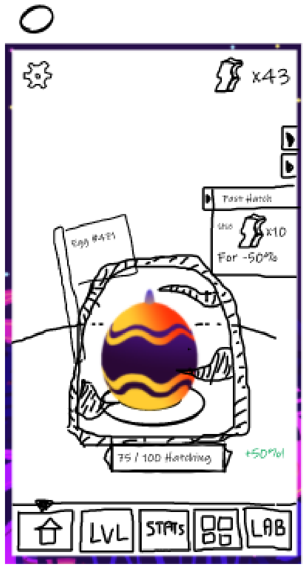
Add Popup to prevent miss click on Hatch ?



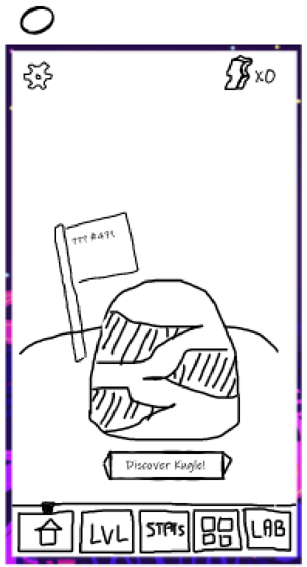
Show the Hatching progress & time remaining (5 days)



Click or "Frotti Frotta #doc" on Egg to see a little animation, do it 10 time to quicken by 10%



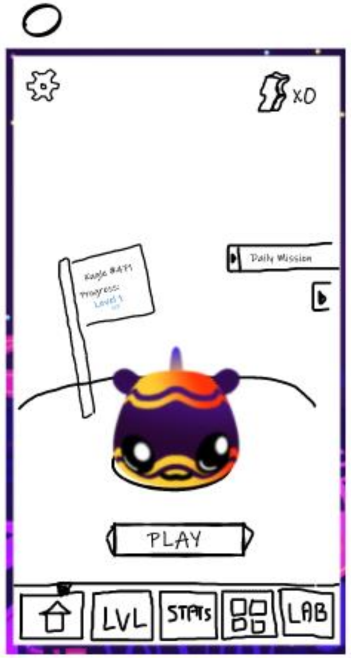
Use 10 ⚡ to quicken by 50%



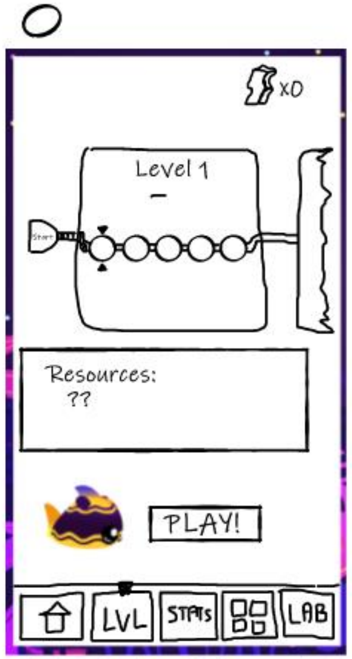
Kugle has been created, click on button to show

Animate Kugle! Yay!!

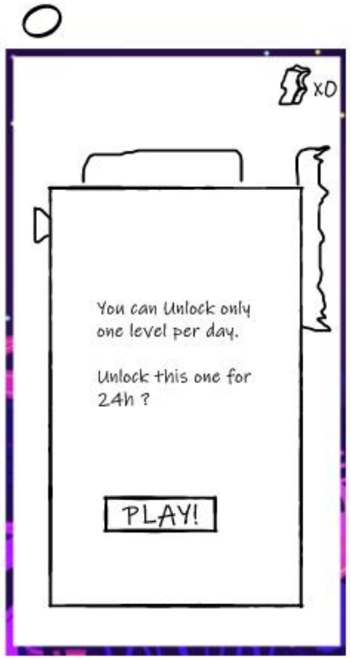
Daily Mission



Kugle ready for daily mission



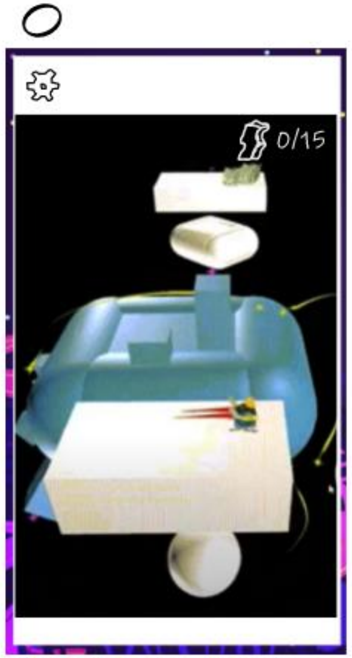
Select the level / Step & Play!



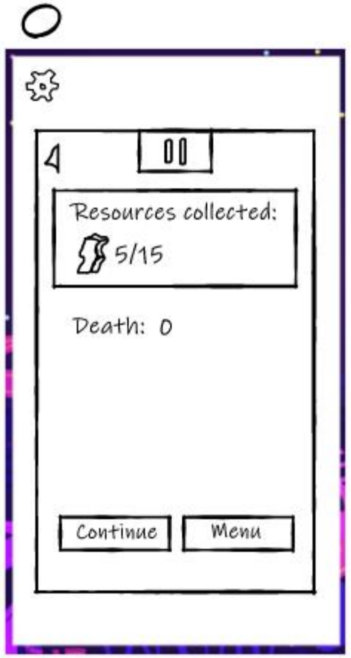
You can Unlock only one level per day.

Unlock this one for 24h ?

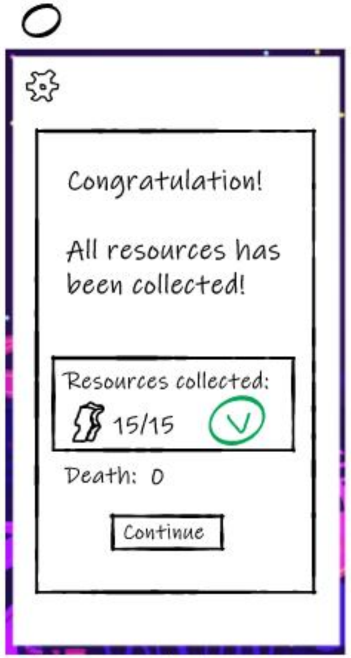
Tel the player the level will be locked for today



Recolt resources, do not die, catch rabbit!



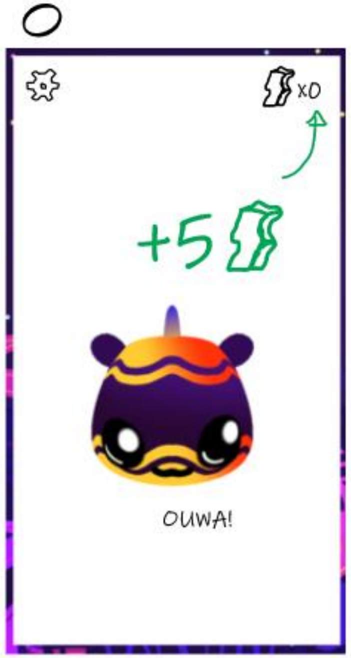
Pause Game, show stats, continue or back to menu



Congratulation!

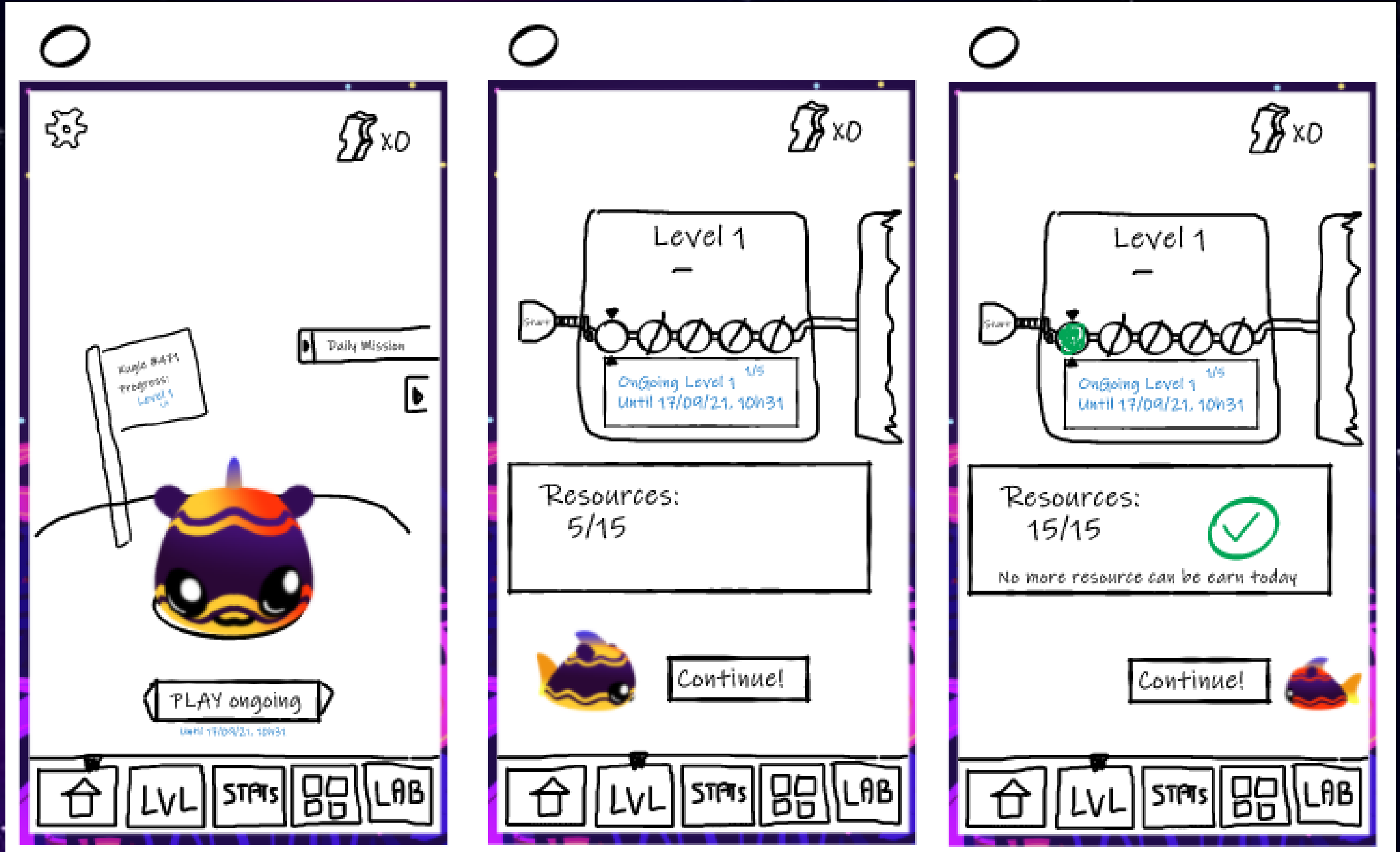
All resources has been collected!

When we got the last resource. Display the Congratulation menu



Animate Kugle! Yay!! -> Go to main menu, or directly toward the Level Selection ?

Get ready for tomorrow



One level has been played today, play ongoing only

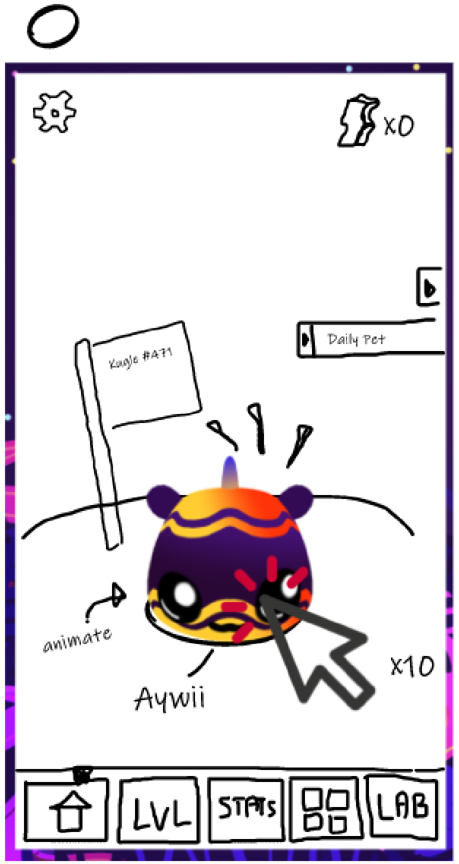
Progress to save per Kugle. Show this progress in explorer on the website.

Do not autorise to change level, we can play only this one.

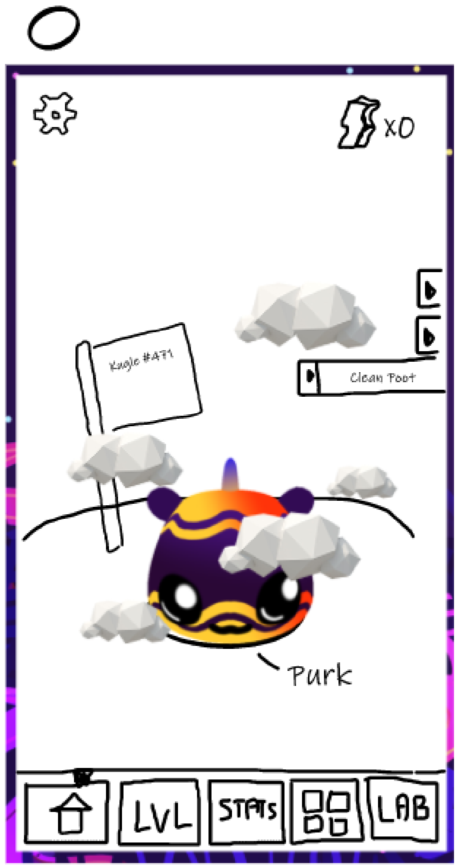
Spawn Resources, player, Rabbit ?

Level finished. Autorise to play again this step if we want

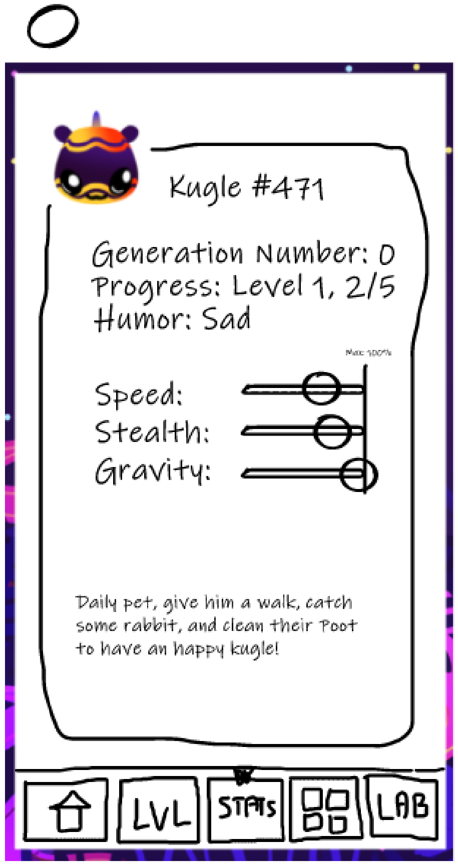
Tamagotchi inspired



Daily Pet in main menu to gain full stats. Daily pet apear Day 2.



When not present for 2 days, kugle left some Poo to clean... Substract stats, from 2 days up to 6 days.



Kugle #471

Generation Number: 0
Progress: Level 1, 2/5
Humor: Sad

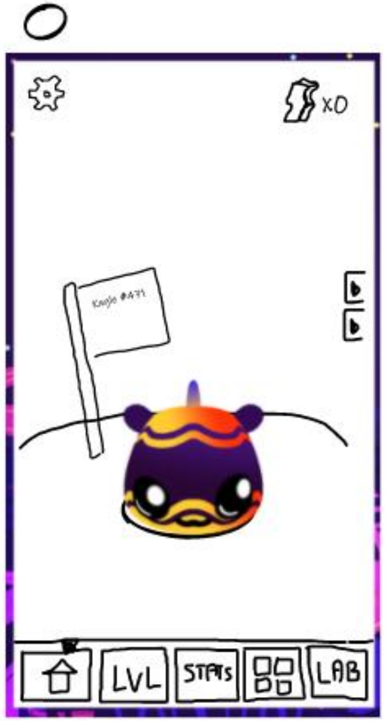
Speed:
Stealth:
Gravity:

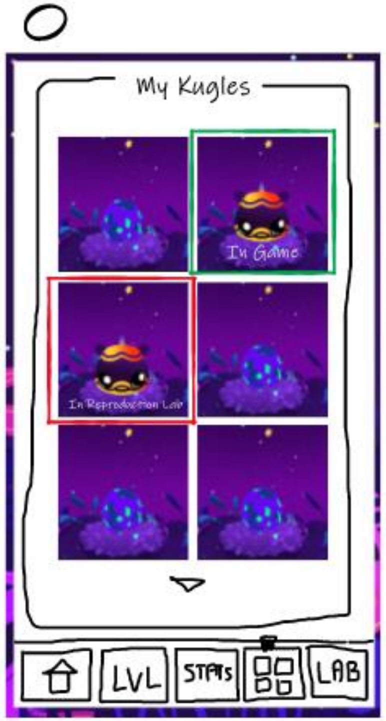
Daily pet, give him a walk, catch some rabbit, and clean their Poot to have an happy kugle!

Daily Pet in main menu to gain full stats. Daily pet apear Day 2.

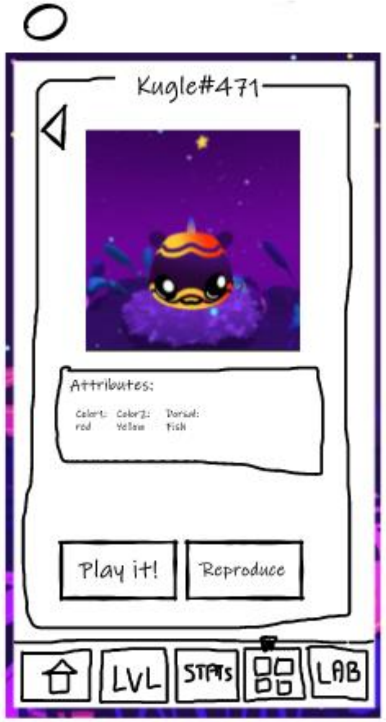
All in Middle, and add/ Remove from Daly mission, daily Pet, Reproduction etc.

My Kugles menu

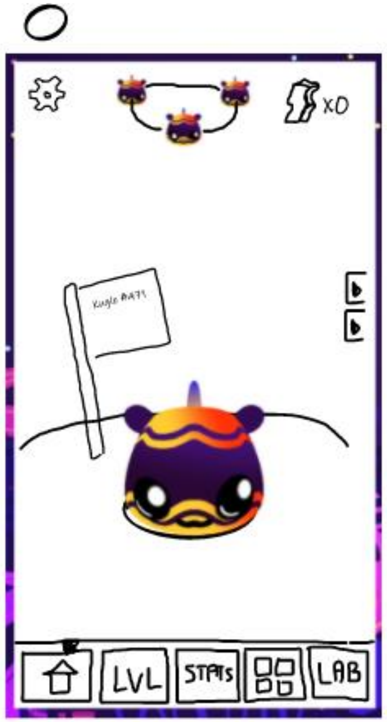




Access to all my kugles & Eggs from this menu. HighLight current Selected

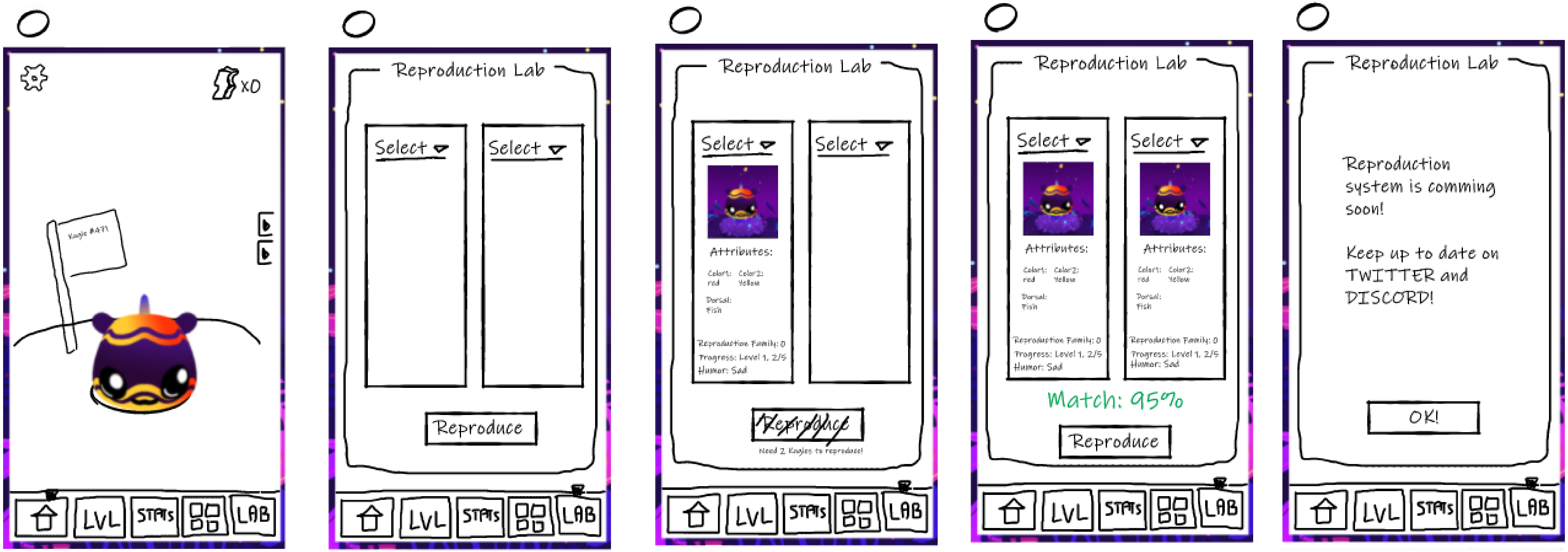


Click on one of them to see attributes, and Click on Use to see it on main menu & play with it



Add Nice Kugle Slider in main Menu to quickly switch between them

Reproduction



Color1: red Color2: Yellow

Dorsal: Fish

Reproduction Family: 0
Progress: Level 1, 2/5
Humor: Sad

Need 2 Kagles to reproduce!

Color1: red Color2: Yellow

Dorsal: Fish

Reproduction Family: 0
Progress: Level 1, 2/5
Humor: Sad

Color1: red Color2: Yellow

Dorsal: Fish

Reproduction Family: 0
Progress: Level 1, 2/5
Humor: Sad

Match: 95%

Reproduction system is comming soon!

Keep up to date on TWITTER and DISCORD!

2. Reproduction & Infinite possibilities

When a player have at least 2 matures Kugles, he can access the reproduction process. To accomplish it, a delay is fixed, also a chance of losing one of the two parents exist.

To minimise this risk, the player can add some resources to the reproduction process.

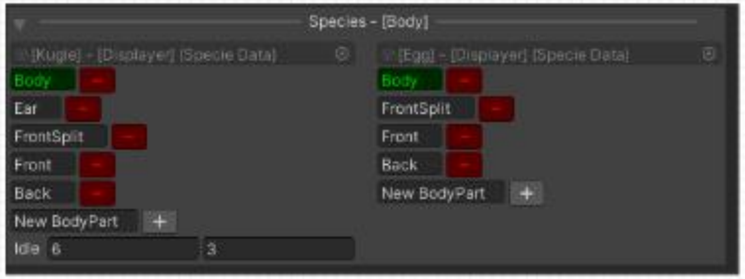
Our generator are absolutly unique, created on Unity, he call multiples standalone generators build by our specialist (usernamehed) to create a new unique combination.

The chance to see two Kugles exactly identical is less than 1 / 10^49

Kugle / Egg Structure

Kugle

Egg



Species - [Body]

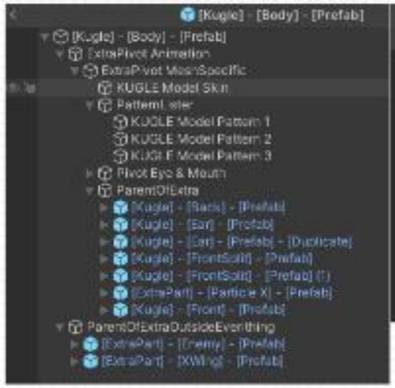
[Kugle] - [Displayer] (Specie Data)

- Body
- Ear
- FrontSplit
- Front
- Back
- New BodyPart +

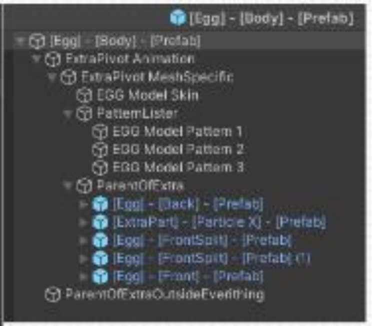
Idle 6 3

[Egg] - [Displayer] (Specie Data)

- Body
- FrontSplit
- Front
- Back
- New BodyPart +



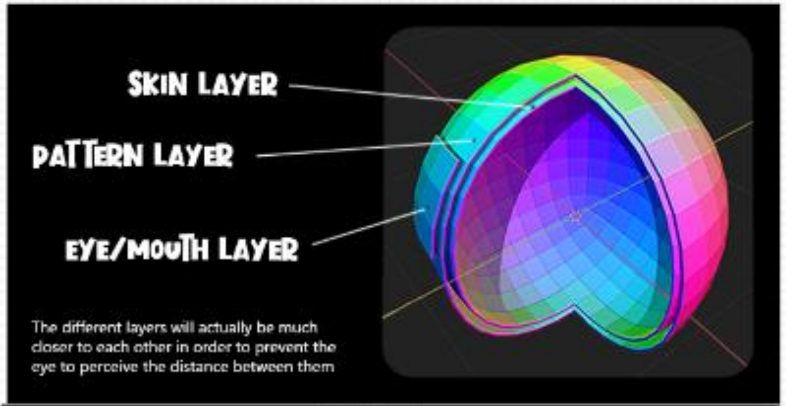
```
[Kugle] - [Body] - [Prefab]
[Kugle] - [Body] - [Prefab]
  ExtraPivot Animation
    ExtraPivot MeshSpecific
      KUGLE Model Skin
      PatternLister
        KUGLE Model Pattern 1
        KUGLE Model Pattern 2
        KUGLE Model Pattern 3
      Pivot Eye & Mouth
      ParentOfExtra
        [Kugle] - [Back] - [Prefab]
        [Kugle] - [Ear] - [Prefab]
        [Kugle] - [Ear] - [Prefab] - [Duplicate]
        [Kugle] - [FrontSplit] - [Prefab]
        [Kugle] - [FrontSplit] - [Prefab] (1)
        [ExtraPart] - [Particle X] - [Prefab]
        [Kugle] - [Front] - [Prefab]
  ParentOfExtraOutsideEverthing
    [ExtraPart] - [Enemy] - [Prefab]
    [ExtraPart] - [XWing] - [Prefab]
```



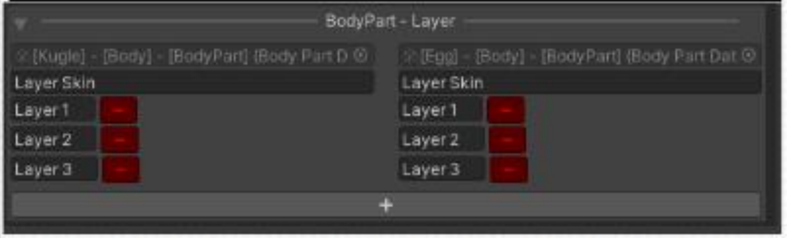
```
[Egg] - [Body] - [Prefab]
[Egg] - [Body] - [Prefab]
  ExtraPivot Animation
    ExtraPivot MeshSpecific
      EGG Model Skin
      PatternLister
        EGG Model Pattern 1
        EGG Model Pattern 2
        EGG Model Pattern 3
      ParentOfExtra
        [Egg] - [Back] - [Prefab]
        [ExtraPart] - [Particle X] - [Prefab]
        [Egg] - [FrontSplit] - [Prefab]
        [Egg] - [FrontSplit] - [Prefab] (1)
        [Egg] - [Front] - [Prefab]
  ParentOfExtraOutsideEverithing
```

Kugles & Eggs Follows the same architecture. Kugles & Eggs are composed by Multiple BodyParts. Eg: Body, Ear, Back.

BodyParts



The different layers will actually be much closer to each other in order to prevent the eye to perceive the distance between them



BodyPart - Layer

[Kugle] - [Body] - [BodyPart] (Body Part D

- Layer Skin
- Layer 1
- Layer 2
- Layer 3

[Egg] - [Body] - [BodyPart] (Body Part Dat

- Layer Skin
- Layer 1
- Layer 2
- Layer 3

+

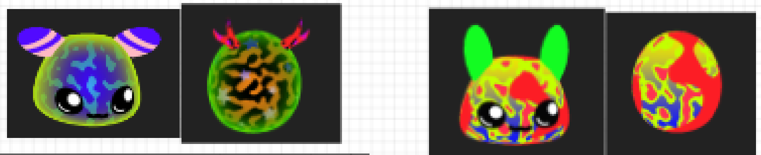
Each BodyParts are composed of a Skin, and multiple Layers. For the Body of the Kugle, we add extra layer for eyes & mouth.

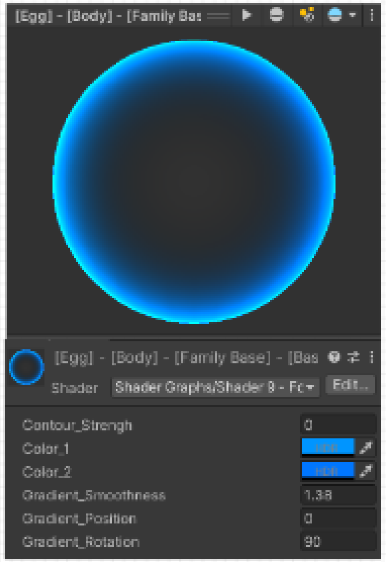
Each Layer can have a specific Shader associated

Those Bodypart can have multiple familly of Models.
Eg: The BodyPart Front have a "Horn" familly. This familly is divided into 5 different models (Deer horn, Goat horn...).

Kugle / Egg Structure

Shaders





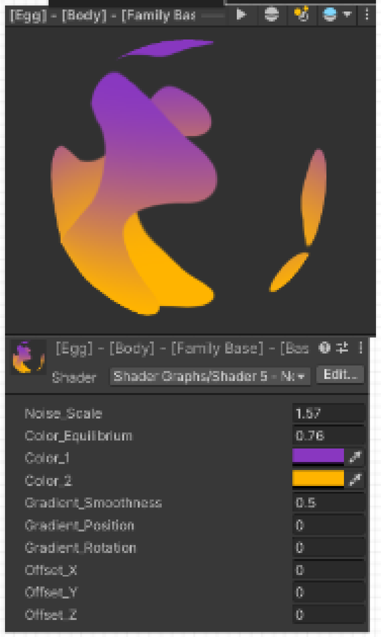
[Egg] - [Body] - [Family Bas

[Egg] - [Body] - [Family Base] - [Bas

Shader: Shader Graphs/Shader 9 - Fc

Edit...

Contour_Strengh 0
Color_1 HDR
Color_2 HDR
Gradient_Smoothness 1.38
Gradient_Position 0
Gradient_Rotation 90



[Egg] - [Body] - [Family Bas

[Egg] - [Body] - [Family Base] - [Bas

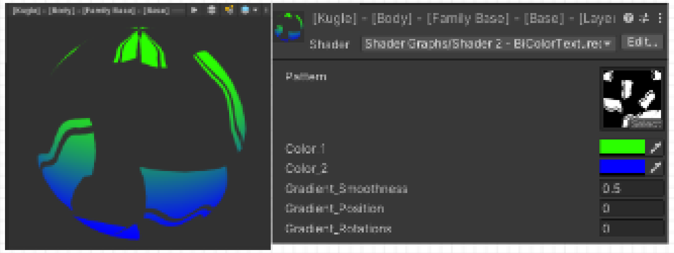
Shader: Shader Graphs/Shader 5 - Nc

Edit...

Noise_Scale 1.57
Color_Equilibrium 0.76
Color_1
Color_2
Gradient_Smoothness 0.5
Gradient_Position 0
Gradient_Rotation 0
Offset_X 0
Offset_Y 0
Offset_Z 0

A Shader is a graphical element to apply to specific Layer of a BodyPart. Thoses shaders have multiples parameter that we can use to create high diversity insinde the same shader.

Shaders - Pattern specific



[Kugle] - [Body] - [Family Base] - [Base]

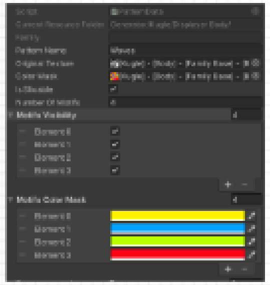
[Kugle] - [Body] - [Family Base] - [Base] - [Layer

Shader: Shader Graphs/Shader 2 - BIColorText.re

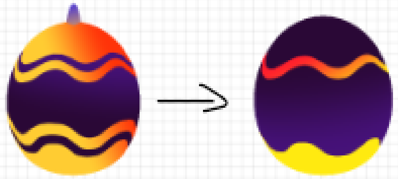
Edit...

Pattern
Color 1
Color 2
Gradient_Smoothness 0.5
Gradient_Position 0
Gradient_Rotations 0

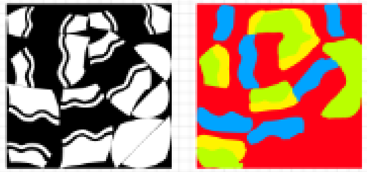
For Shader with a custom Texture (Qualified as Pattern), we've added an extra layer of complexity for our generation. We have created an algorythm that CUT the textures given by our graphist in differents Parts.



Script: PatternData
Current Resource Folder: Generator/Kugle/Displayer/Body/
Family
Pattern Name: Waves
Original Texture: [Kugle] - [Body] - [Family Base] - [B
Color Mask: [Kugle] - [Body] - [Family Base] - [B
Is Sliceable: ✓
Number Of Motifs: 4
Motifs Visibility: 4
Element 0 ✓
Element 1 ✓
Element 2 ✓
Element 3 ✓
Motifs Color Mask: 4
Element 0 🟨
Element 1 🟦
Element 2 🟩
Element 3 🟥



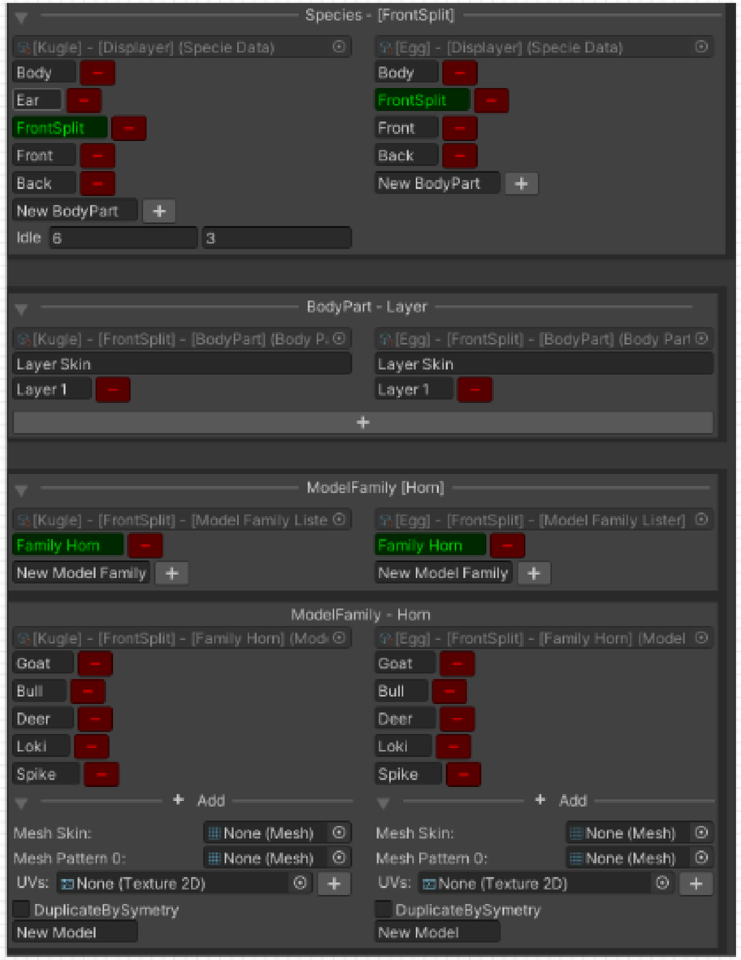
We achieve this effect by asking our graphist to create for each Pattern an additionnal "ColorMask" that identify element to a specific Color. This element is stored, and therefore can be shown or hidden in the generation process.



And if you wonder why those images are weird, it's because those textures are meant to be applied to a 3D model. Our graphist can directly paint on the Kugle / Egg in Substance Painting.

Displayer Creator

Add BodyParts & Models



Species - [FrontSplit]

[Kugle] - [Displayer] (Specie Data)
Body
Ear
FrontSplit
Front
Back
New BodyPart
Idle 6 3

[Egg] - [Displayer] (Specie Data)
Body
FrontSplit
Front
Back
New BodyPart

BodyPart - Layer

[Kugle] - [FrontSplit] - [BodyPart] (Body P…
Layer Skin
Layer 1

[Egg] - [FrontSplit] - [BodyPart] (Body Part
Layer Skin
Layer 1

ModelFamily [Horn]

[Kugle] - [FrontSplit] - [Model Family Liste
Family Horn
New Model Family

[Egg] - [FrontSplit] - [Model Family Lister]
Family Horn
New Model Family

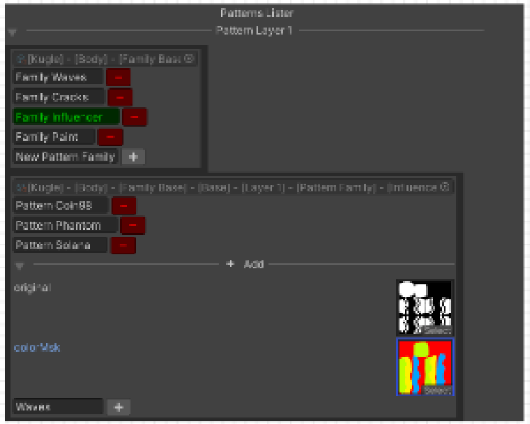
ModelFamily - Horn

[Kugle] - [FrontSplit] - [Family Horn] (Mod…
Goat
Bull
Deer
Loki
Spike
+ Add
Mesh Skin: None (Mesh)
Mesh Pattern 0: None (Mesh)
UVs: None (Texture 2D)
DuplicateBySymetry
New Model

[Egg] - [FrontSplit] - [Family Horn] (Model
Goat
Bull
Deer
Loki
Spike
+ Add
Mesh Skin: None (Mesh)
Mesh Pattern 0: None (Mesh)
UVs: None (Texture 2D)
DuplicateBySymetry
New Model

We have a powerfull tool that allow us to easly Create BodyParts, and for each of them, we can specify like in this picture multiple Family (here Horn), and in this family, we can add any Model with they specific 3D render, layer & shaders.

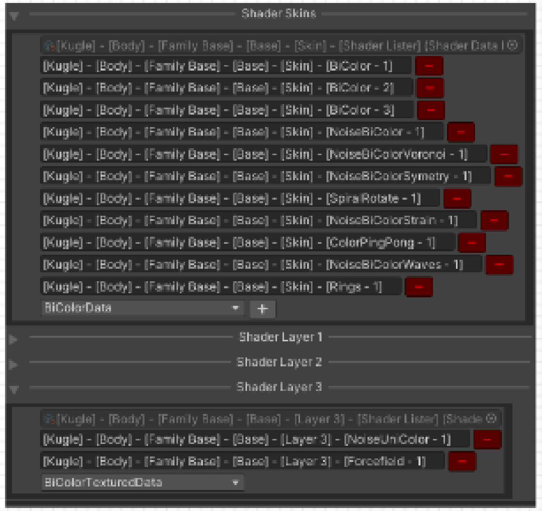
Add Shaders & Patterns



Patterns Lister
Pattern Layer 1

[Kugle] - [Body] - [Family Basi
Family Waves
Family Cracks
Family Influencer
Family Palm
New Pattern Family

[Kugle] - [Body] - [Family Base] - [Base] - [Layer 1] - [Pattern Family] - [Influence
Pattern Coln88
Pattern Phantom
Pattern Solana
+ Add
original
colorMsk
Waves



Shader Skins

[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [Shader Lister] (Shader Data I
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [BiColor - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [BiColor - 2]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [BiColor - 3]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [NoiseBiColor - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [NoiseBiColorVoronoi - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [NoiseBiColorSymetry - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [SpiralRotate - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [NoiseBiColorStrain - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [ColorPingPong - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [NoiseBiColorWaves - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Skin] - [Rings - 1]
BiColorData

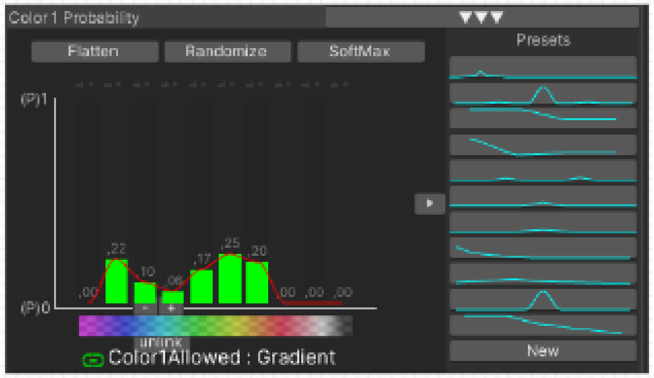
Shader Layer 1
Shader Layer 2
Shader Layer 3

[Kugle] - [Body] - [Family Base] - [Base] - [Layer 3] - [Shader Lister] (Shade
[Kugle] - [Body] - [Family Base] - [Base] - [Layer 3] - [NoiseUniColor - 1]
[Kugle] - [Body] - [Family Base] - [Base] - [Layer 3] - [Forcefield - 1]
BiColorTexturedData

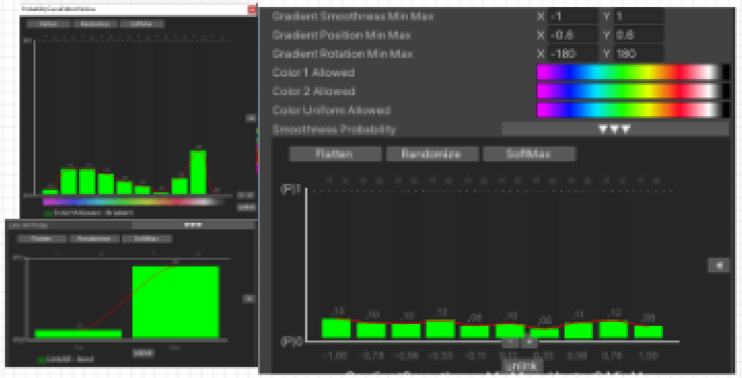
Each model have a list of layers, and for each of them, we can specify the shader types we can use, and also their pattern if needed.

Kugle Generation

ProbabilityCurve



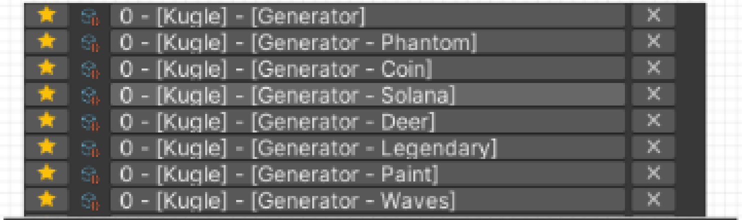
This tool is without question THE tool that made the success of Kugle. This is an highly versatile & easy to use plugin we made to allow us to create probability curve linked to a given parametter. It give us the posibility to draw, flatten, select a specific value of a specific parametter.



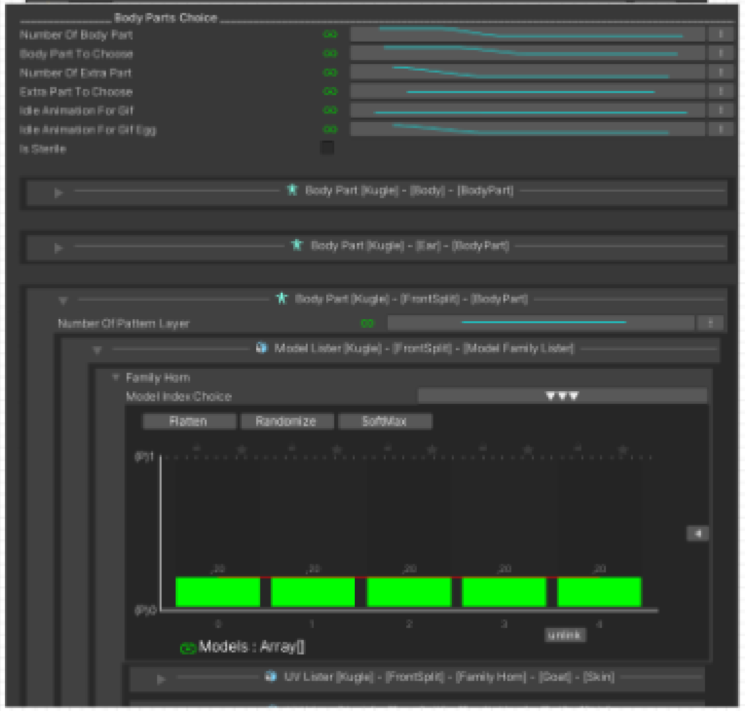
Gradient Smoothness Min Max X -1 Y 1
Gradient Position Min Max X -0.6 Y 0.6
Gradient Rotation Min Max X -180 Y 180
Color 1 Allowed
Color 2 Allowed
Color Uniform Allowed
Smoothness Probability

In those exemple, the ProbabilityCurve is linked to a Gradient Color, a Boolean, or a Min/Max range. We can clearly see the benefit to directly have all the information needed on the tool, to define the probability of a given value easly.

Generators (or serie maker)



0 - [Kugle] - [Generator]
0 - [Kugle] - [Generator - Phantom]
0 - [Kugle] - [Generator - Coin]
0 - [Kugle] - [Generator - Solana]
0 - [Kugle] - [Generator - Deer]
0 - [Kugle] - [Generator - Legendary]
0 - [Kugle] - [Generator - Paint]
0 - [Kugle] - [Generator - Waves]



Body Parts Choice
Number Of Body Part
Body Part To Choose
Number Of Extra Part
Extra Part To Choose
Idle Animation For Gif
Idle Animation For Gif Egg
Is Sterile

Body Part [Kugle] - [Body] - [BodyPart]
Body Part [Kugle] - [Ear] - [BodyPart]
Body Part [Kugle] - [FrontSplit] - [BodyPart]
Number Of Pattern Layer
Model Lister [Kugle] - [FrontSplit] - [Model Family Lister]
Family Horn
Model Index Choice

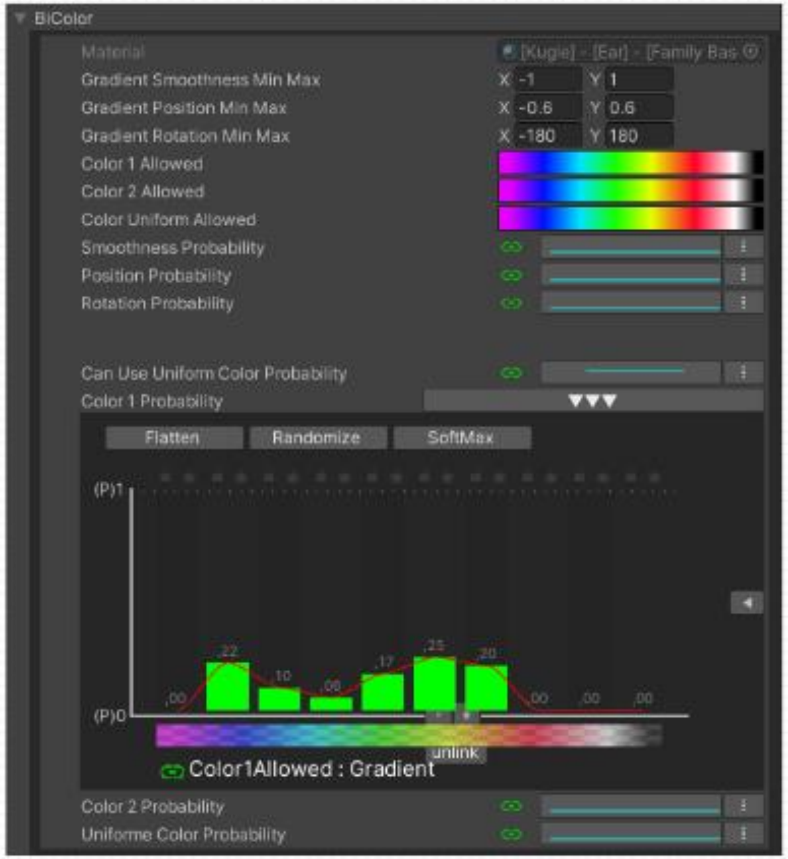
UV Lister [Kugle] - [FrontSplit] - [Family Horn] - [Goat] - [Skin]

Generators are the second tool that made our success. A generator is a list of Choice & Probability to create a Serie. Those choice can be:

- Do we have Horn in the serie ? How many ? in % of chance.
- Define the % of chance to use a specific Shader for a given Horn.
- Many, many good thing

Kugle Generation

Generators (practical example)



BiColor

Material [Kugle] - [Ear] - [Family Bas

Gradient Smoothness Min Max X -1 Y 1

Gradient Position Min Max X -0.6 Y 0.6

Gradient Rotation Min Max X -180 Y 180

Color 1 Allowed

Color 2 Allowed

Color Uniform Allowed

Smoothness Probability

Position Probability

Rotation Probability

Can Use Uniform Color Probability

Color 1 Probability

Color1Allowed : Gradient

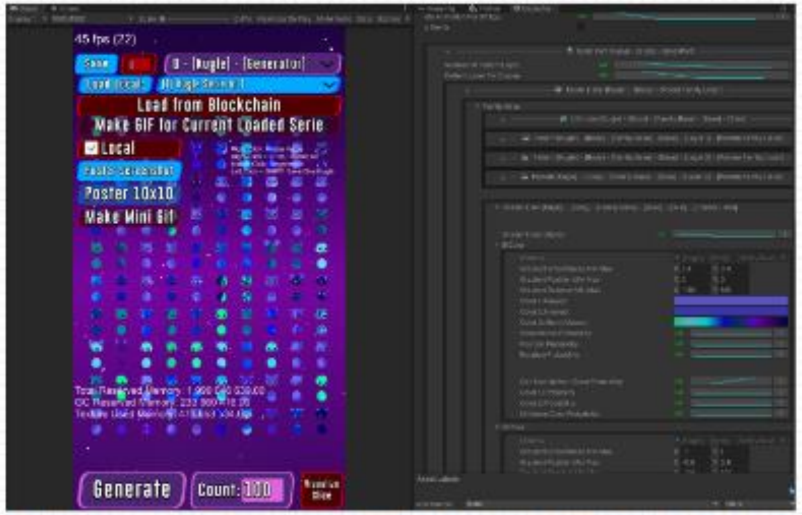
Color 2 Probability

Uniforme Color Probability

Let's assume the shader "BiColor" is choosen, if so. We can define the Min/Max range of each paramettr for this shader (position, rotation, smoothness, Color Gradient).

And more: for a given parameter (eg: the Color1), we an specify thanks to the probabilityCurve tool, the % of chance we get the Yellow color, compared to the black color. Those can be refine even more for more precision if needed.

Generation Iteration



45 fps (72)

And this get even further. We made a specific Scene in Unity that allow us to Generate in less than one second a list of hundred or more Kugle / Egg based on our Generator.

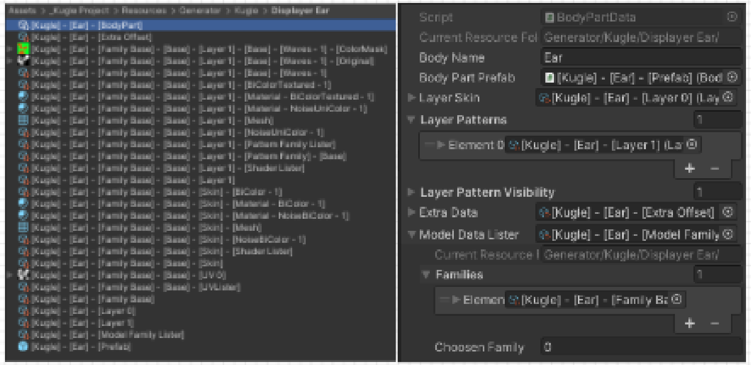
A single modification in the Color of the Generator, a button click "Generate", and we generate again 100 different Kugle with the new data.

This allow us a crazy amount of iteration, easly accessible by our graphist.

In this scene we can switch between Generator: The Genesis one, the Waves, and so on.

Save & Load Process

Displayers assets

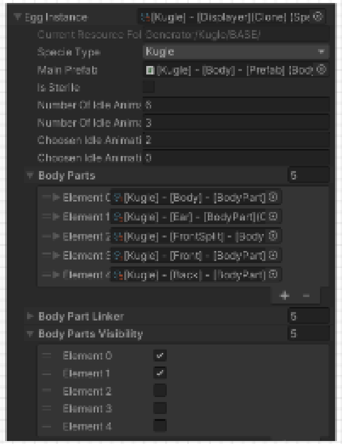


Assets > _Kugle Project > Resources > Generator > Kugle > Displayer Ear

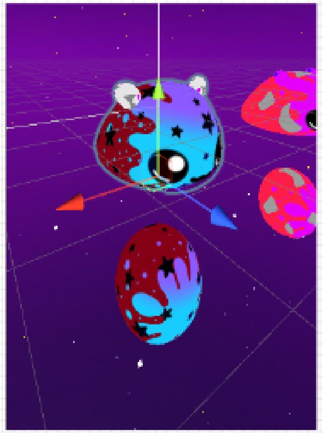
```
[Kugle] - [Ear] - [BodyPart]
[Kugle] - [Ear] - [Extra Offset]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Base] - [Waves - 1] - [ColorMask]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Base] - [Waves - 1] - [Original]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Base] - [Waves - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [BiColorTextured - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Material - BiColorTextured - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Material - NoiseUniColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Mesh]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [NoiseUniColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Pattern Family Lister]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Pattern Family] - [Base]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1] - [Shader Lister]
[Kugle] - [Ear] - [Family Base] - [Base] - [Layer 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [BiColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [Material - BiColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [Material - NoiseBiColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [Mesh]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [NoiseBiColor - 1]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin] - [Shader Lister]
[Kugle] - [Ear] - [Family Base] - [Base] - [Skin]
[Kugle] - [Ear] - [Family Base] - [Base] - [UV 0]
[Kugle] - [Ear] - [Family Base] - [Base] - [UVLister]
[Kugle] - [Ear] - [Family Base]
[Kugle] - [Ear] - [Layer 0]
[Kugle] - [Ear] - [Layer 1]
[Kugle] - [Ear] - [Model Family Lister]
[Kugle] - [Ear] - [Prefab]
```

```
Script                  BodyPartData
Current Resource Fol    Generator/Kugle/Displayer Ear/
Body Name               Ear
Body Part Prefab        [Kugle] - [Ear] - [Prefab] (Bod
▶ Layer Skin            [Kugle] - [Ear] - [Layer 0] (Lay
▼ Layer Patterns                                   1
    Element 0 [Kugle] - [Ear] - [Layer 1] (La
                                                 + −
▶ Layer Pattern Visibility                         1
▶ Extra Data            [Kugle] - [Ear] - [Extra Offset]
▼ Model Data Lister     [Kugle] - [Ear] - [Model Family
    Current Resource I  Generator/Kugle/Displayer Ear/
  ▼ Families                                       1
      Elemen [Kugle] - [Ear] - [Family Ba
                                                 + −
    Choosen Family      0
```

A Displayer is a list of asset, linked together that represent the structure of the Kugle / Egg. In this exemple for clarity, I show only the structure / data of the Ear BodyPart.



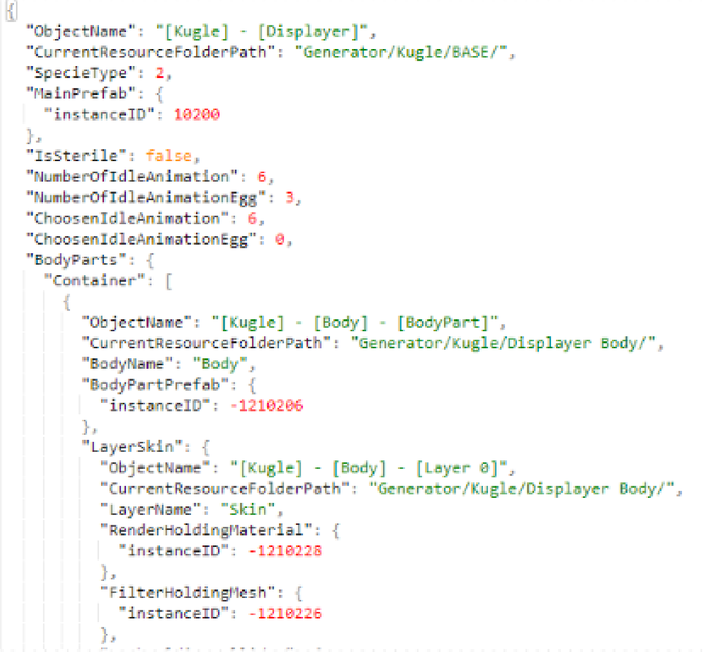
```
▼ Egg Instance            [Kugle] - [Displayer](Clone) (Spe
    Current Resource Fol  Generator/Kugle/BASE/
    Specie Type           Kugle
    Main Prefab           [Kugle] - [Body] - [Prefab] (Bod
    Is Sterile            □
    Number Of Idle Anim:  6
    Number Of Idle Anim:  3
    Choosen Idle Animati  2
    Choosen Idle Animati  0
  ▼ Body Parts                                   5
      Element 0 [Kugle] - [Body] - [BodyPart]
      Element 1 [Kugle] - [Ear] - [BodyPart](C
      Element 2 [Kugle] - [FrontSplit] - [Body
      Element 3 [Kugle] - [Front] - [BodyPart]
      Element 4 [Kugle] - [Back] - [BodyPart]
                                               + −
  ▶ Body Part Linker                             5
  ▼ Body Parts Visibility                        5
      Element 0   ☑
      Element 1   ☑
      Element 2   □
      Element 3   □
      Element 4   □
```



When we generate Kugles, we generate instance (clones) of those elements in game.

Displayers Json

Now we need a Save / Load system that we can externalise on the blockchain / Server. Here you have the start of the Kugle Displayer.



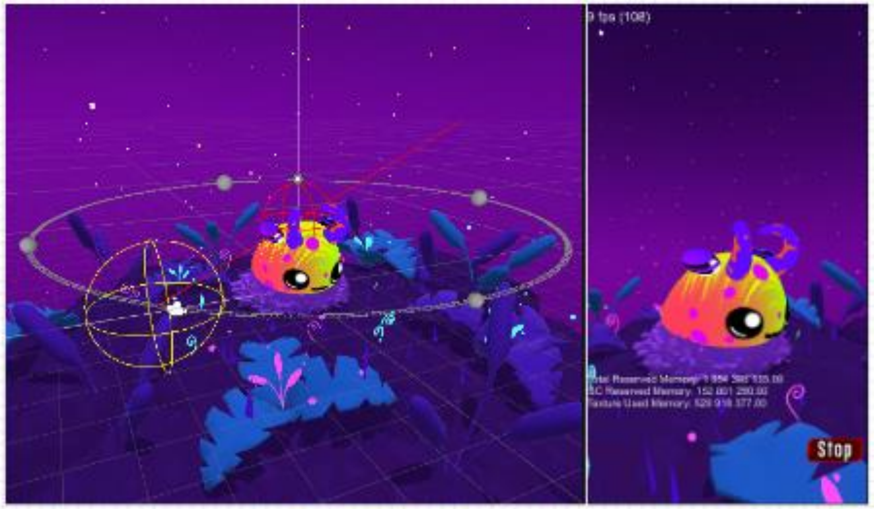
```
{
  "ObjectName": "[Kugle] - [Displayer]",
  "CurrentResourceFolderPath": "Generator/Kugle/BASE/",
  "SpecieType": 2,
  "MainPrefab": {
    "instanceID": 10200
  },
  "IsSterile": false,
  "NumberOfIdleAnimation": 6,
  "NumberOfIdleAnimationEgg": 3,
  "ChoosenIdleAnimation": 6,
  "ChoosenIdleAnimationEgg": 0,
  "BodyParts": {
    "Container": [
      {
        "ObjectName": "[Kugle] - [Body] - [BodyPart]",
        "CurrentResourceFolderPath": "Generator/Kugle/Displayer Body/",
        "BodyName": "Body",
        "BodyPartPrefab": {
          "instanceID": -1210206
        },
        "LayerSkin": {
          "ObjectName": "[Kugle] - [Body] - [Layer 0]",
          "CurrentResourceFolderPath": "Generator/Kugle/Displayer Body/",
          "LayerName": "Skin",
          "RenderHoldingMaterial": {
            "instanceID": -1210228
          },
          "FilterHoldingMesh": {
            "instanceID": -1210226
          },
```

It wasn't an easy task. We can't save everything. Data like Mesh, Materials, Texture are present in the Unity App, but we cannot save them into a Json.
So when we have a reference of an asset. we save the path.

PS: well not all asset. When the asset is a Sub-Dislayer, we can't just take the path of the template, we need the actual data generated, so for that we convert the path to another Json of the displayer. Complex stuff, I will not go any further on that.

Finally we create the GIF

GIF Maker



When we have a good first look at the serie, we can decide to save their Json, and Create their GIF. We use 120 pictures for the gif, with 6 delay between each frame.

The process is as follow: first we place the Kugle at the right position / rotation. We play the animation, Particle from the begening, and we start the Rotation inside Unity, saving 120 Texture2D from the Camera. Png picturs are saved in parallele from a Separate thread.

Then we send all pics to an external ImageMagick process that create a GIF High quility for 2.5Mo!

After that, we repeat the process with the Egg, and then with all Kugles of the serie. This process can take up to 13h for our biggest serie of 600.

3.The choice of the Solana blockchain

After long research, tests, and explorations of various blockchains .. We decided to turn to the blockchain which seems to us the most in balance between:

- The original spirit of the Blockchain universe initiated by Bitcoin: Decentralization and transparency.

- The resolution of the problems inherent to the latter, namely the cost of use, the subjective slowness of confirmation, the impossibility of creating smart contracts.

Built for

SOLANA

unity

SOLFLARE

4. Initial eggs distributions

Egg distribution are event consist of launching new specific allele by sending eggs in a automated starship.

Each allele are unique and need to be preserved by reproduction else he was lose for ever.

Theses eggs are produced directly by the KugleCorp laboratory.

30% of the eggs are distributed free of charge.

The chances of receiving them are proportional to the number of lottery tickets held by the players.

The rest of the eggs produced for each series can be obtained in exchange for GÜ token on the kugle.org website under the tab : "KurKet".

5. Ecological objective

Solana's environmental impact is very low. But by using this beautiful ecosystem we want to make it neutral with a marge of positive carbon dioxide absorption.

We calculate CO2 emission for Solana node is lower than 2 ton of CO2 per years. One tree capte ~ 1 ton of CO2.

So KugleCorp target to doing donation to trees.org.
Our minimal objective is 4 $ / node this year to be wide.

At this time : 1064 nodes process the Solana's ecosystem.

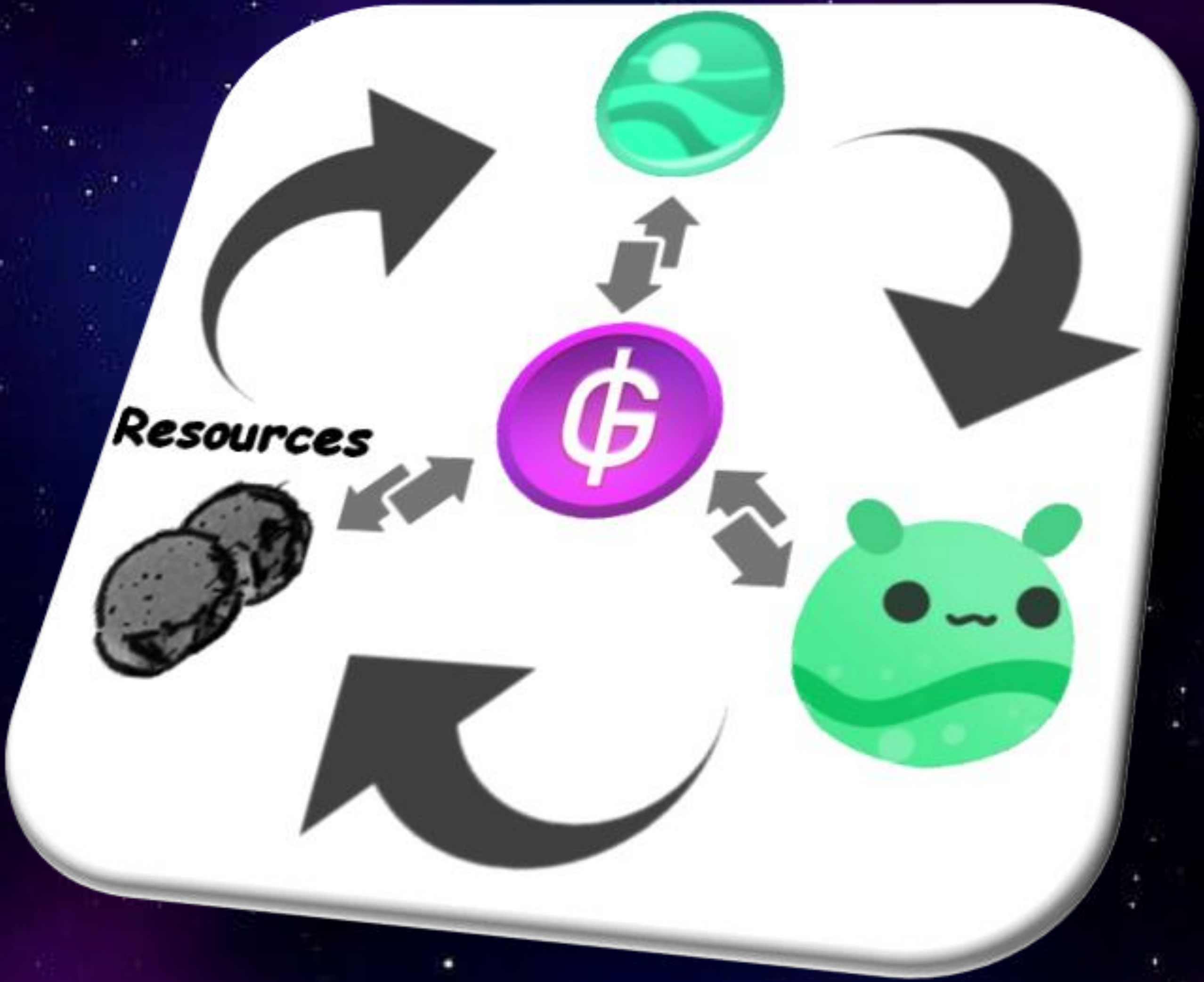
6. GÜ SPL Token & Circular economy

Reason why we choosing to create a SPL token instead of simply using SOL is to create a local economic system like any classic game.

By this process, all owners of GÜ can pretend to receive eggs at any new generations.

Also, the GÜ is made to circulating into players and KugleCorp himself, by multiples marketplaces, primary and second-hand market for all types of resources can be win and use in the game.

The circularity of the GÜ in a simple diagram



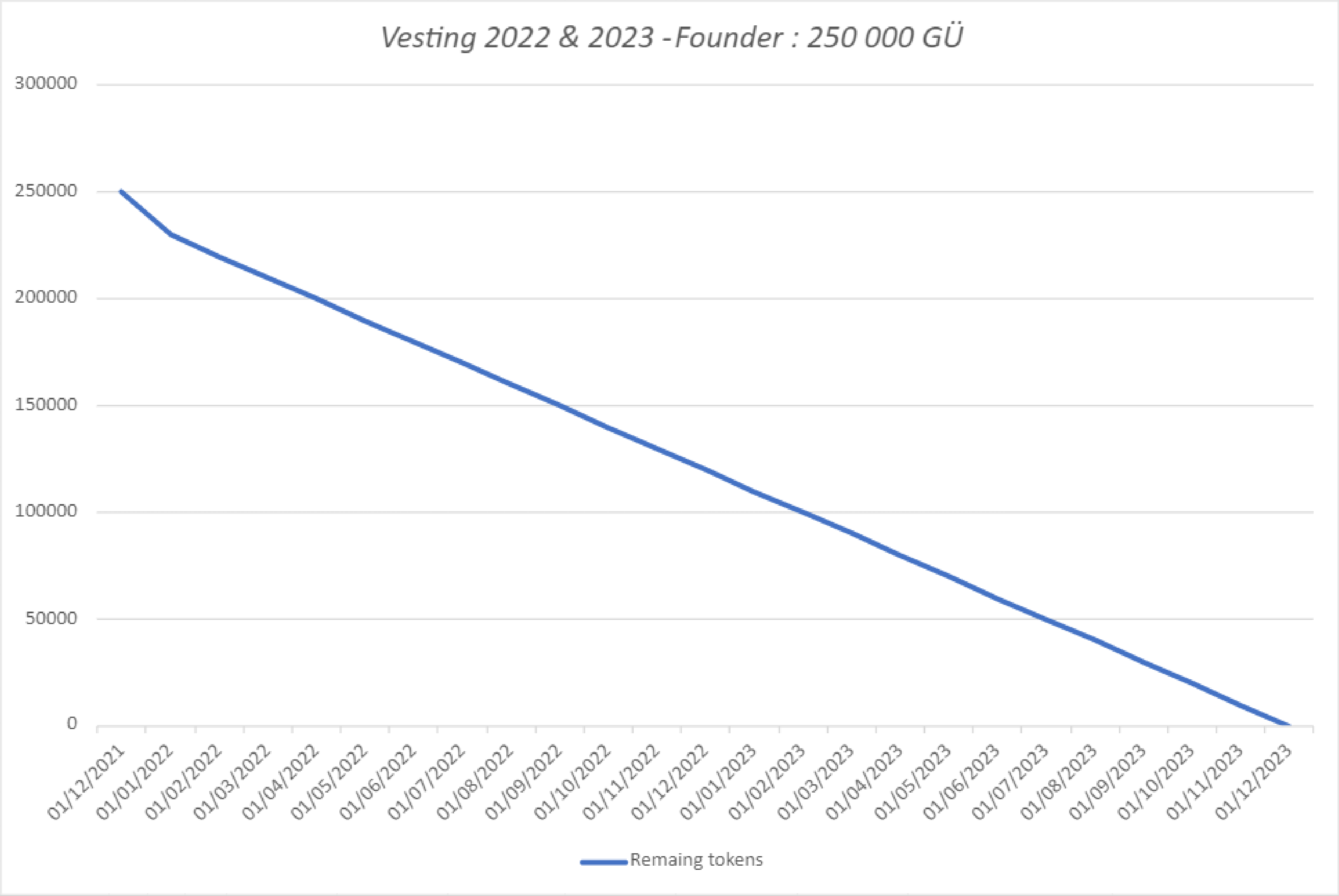
GÜ token : Distribution

All GÜ been minted on the day 1. Distribution process using two methods (except the classic liquidity AMM) :

-> Initial sale directly on the website, price fixed by step, assuming 4 distributions step of 250 000 GÜ.

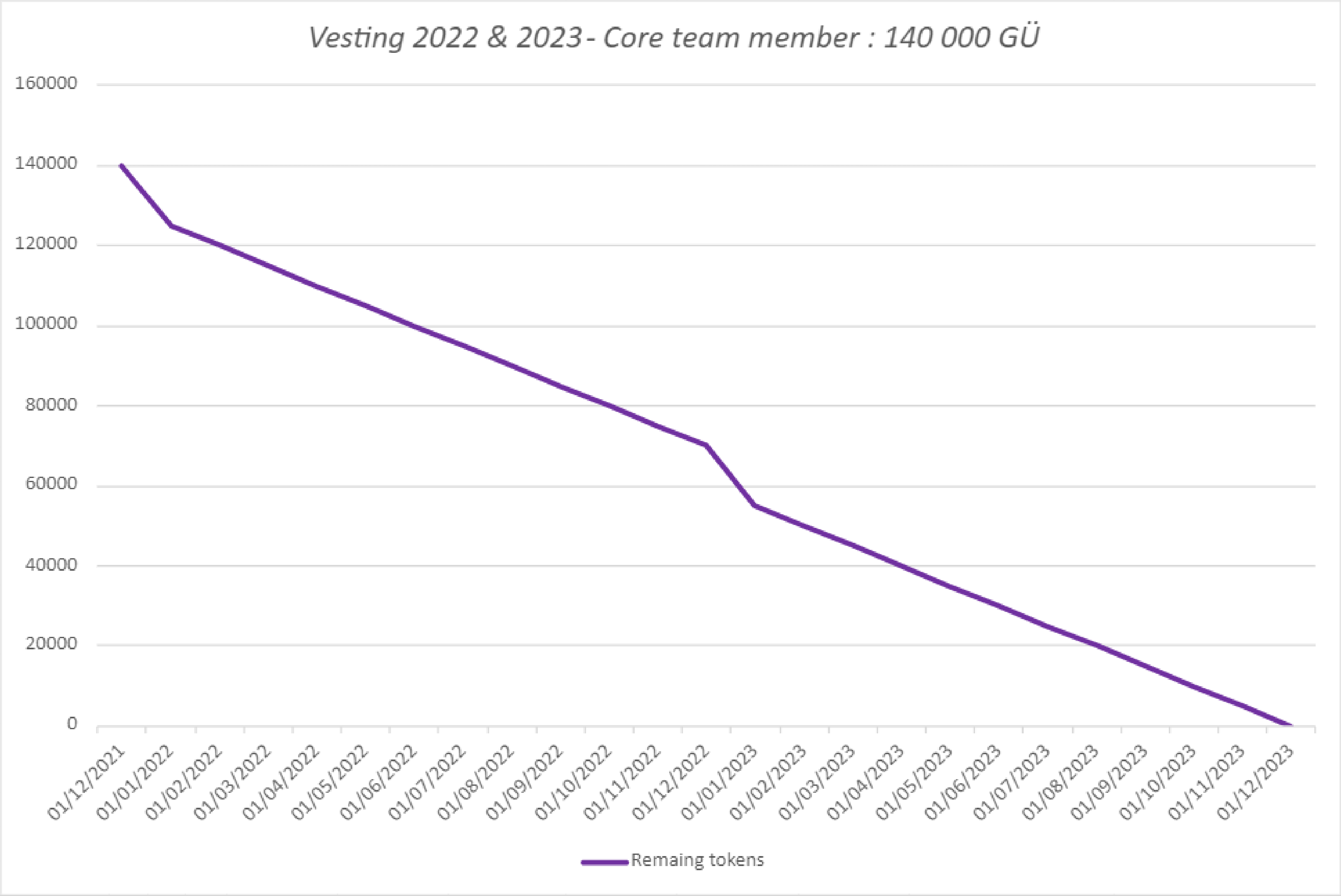
Important note : Every USDC gain of the initial sale are used to add liquidity on the GÜ/USDC AMM pool (Raydium)

-> Player's game income can be win by multiples methodes, for exemple by looting resources in the daily mission and selling them on the appropriate AMM (We load liquidity pools of [Resources/GÜ] to initiate this possibility.

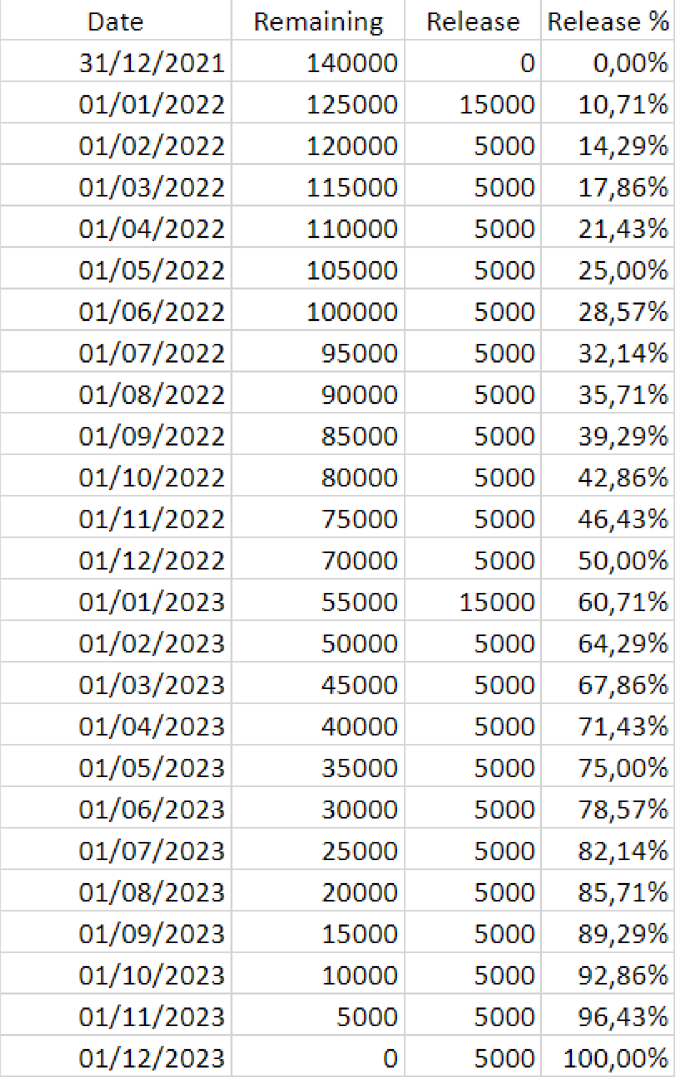


Vesting 2022 & 2023 -Founder : 250 000 GÜ

Date	Remaining	Release	Release %
31/12/2021	250000	0	0,00%
01/01/2022	230000	20000	8,00%
01/02/2022	220000	10000	12,00%
01/03/2022	210000	10000	16,00%
01/04/2022	200000	10000	20,00%
01/05/2022	190000	10000	24,00%
01/06/2022	180000	10000	28,00%
01/07/2022	170000	10000	32,00%
01/08/2022	160000	10000	36,00%
01/09/2022	150000	10000	40,00%
01/10/2022	140000	10000	44,00%
01/11/2022	130000	10000	48,00%
01/12/2022	120000	10000	52,00%
01/01/2023	110000	10000	56,00%
01/02/2023	100000	10000	60,00%
01/03/2023	90000	10000	64,00%
01/04/2023	80000	10000	68,00%
01/05/2023	70000	10000	72,00%
01/06/2023	60000	10000	76,00%
01/07/2023	50000	10000	80,00%
01/08/2023	40000	10000	84,00%
01/09/2023	30000	10000	88,00%
01/10/2023	20000	10000	92,00%
01/11/2023	10000	10000	96,00%
01/12/2023	0	10000	100,00%



Vesting 2022 & 2023 - Core team member : 140 000 GÜ



Date	Remaining	Release	Release %
31/12/2021	140000	0	0,00%
01/01/2022	125000	15000	10,71%
01/02/2022	120000	5000	14,29%
01/03/2022	115000	5000	17,86%
01/04/2022	110000	5000	21,43%
01/05/2022	105000	5000	25,00%
01/06/2022	100000	5000	28,57%
01/07/2022	95000	5000	32,14%
01/08/2022	90000	5000	35,71%
01/09/2022	85000	5000	39,29%
01/10/2022	80000	5000	42,86%
01/11/2022	75000	5000	46,43%
01/12/2022	70000	5000	50,00%
01/01/2023	55000	15000	60,71%
01/02/2023	50000	5000	64,29%
01/03/2023	45000	5000	67,86%
01/04/2023	40000	5000	71,43%
01/05/2023	35000	5000	75,00%
01/06/2023	30000	5000	78,57%
01/07/2023	25000	5000	82,14%
01/08/2023	20000	5000	85,71%
01/09/2023	15000	5000	89,29%
01/10/2023	10000	5000	92,86%
01/11/2023	5000	5000	96,43%
01/12/2023	0	5000	100,00%

Team

Ugo Belfiore - Co-Founder
Alias: usernameHed

- Unity Expert Tool Programmer
- Game-Developper
- Gameplay Programmer
- Studie: Epitech, ENJMIN.

I love making game (not even playing them that much), Prototyping anything, turning emotion into software, with a good architecture, and Lead a Team I am from the Video Game industry.

I've worked on more than 50+ project, from personnal, student & professionnal projects, up to 2 big AAA project. And to be short: Creating Kugle is way more fun than being a pawn in a big AAA!

Team

BillyBoy –Back developper
Alias : BB

Work skills:
Web developer

- Server management
- CI/CD integrations

Personal skills:

- Social
- Acrobat
- Piano
- Resourceful

After my bachelor degree, I went to the 42 school in Paris where I learned programming through "C language" and web development with HTML/CSS, JavaScript and PHP languages.

During my 3 year of studying, I got recruited and began my adventure as a web developer (2017). In the meantime I love using my time doing several types of sports like Slackline, Parkour, Tennis, hiking …

And playing piano ! Resourceful, I like to discover and learn new sports and skills as soon as I can.

Team

Christophe Bernard –Back developper
Alias : Drake Xorn

Work skills:

- Developer

Additionnal :

- Open source enthusiast
- Crypto Holder
- Badminton player

Team

Clément Martinet - 2D – 3D Artist
Alias : Colonel Moutarde

- Artschool : ESMI (Bordeaux)
- Perspetive
- Anatomy
- Modeling – Texturing
- Shading – Rigging
- 3D Animation
- Use of Photoshop
- Use of all the adobesuite Drawing
- Color theory Self taught in 3D :

(Blender, 3DCoat, Substance Painter, Marvelous Designer)

Also self taught in music,
I play piano for more than 15 years nowI used to compose cubase before starting art studies
Very curious, I love learning new things in too many fields such as science, psychology, anatomy to name a few I also find time to play soccer and work out.
Once I’ve done everything, if there is some time left, I observe the world and try to understand what makes its beauty I have a theory... but I'm still not sure

Team

Benjamin Chierici - Designer
Alias: Heckat

School Digital Electronic System (SEN), Military Navy Instruction.

Self-taught in multiple fields such as

- Art
- Photoshop
- Music
- Painting
- Photography

Lovers of art and images

I take an open look at the world in order to improve my knowledge and skills constantly!

Passionate about video games, I agree a great importance. Always looking for new experience.

Special thanks

Olivier B. (From Sonar.watch)
Alias : LeeZolait

Who help us a lot of times for a better comprehension of the Solana Blockchain while he had a lot of work

Sarielle

Who sketched our ideas in 2D during the first days of the Kugle adventure