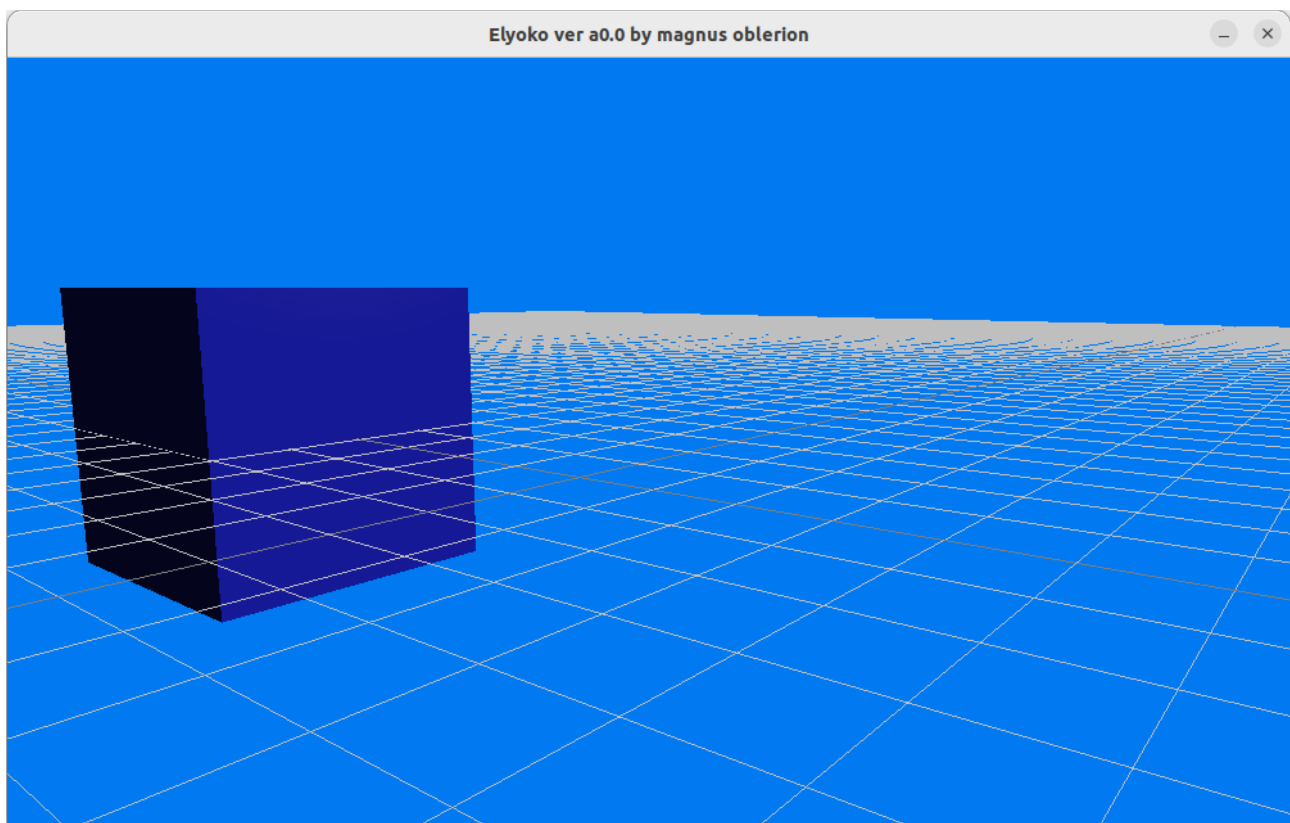


Elyoko

The 3d game engine for
make your lyoko world



by Magnus Oblerion

Description

The 3d game engine make with C , raylib.h and lua.h.

It is lightweight, powerful and easy to extends (lua script).

Feature

- Max 100 preload model
- Max 100 preload texture
- load/draw/unload model (obj,glb)
- load/draw/unload texture (png,jpg)
- load/draw textured plane from image
- draw 3d primitive (cube,sphere)
- draw 2d primitive (rect,circle,point)
- draw text
- keyboard/mouse input -> camera control
- gamepad input -> camera control

Run script CLI

on window

```
elyoko.exe main.lua
```

on linux

```
./elyoko main.lua
```

Entry point

If you create file project.entry beside of binary, elyoko will run project.lua at start.

Your *.lua and *.entry need same name for work.

API

1) Main loop

```
function ELYOK02D()  
-- loop 2d  
end  
  
function ELYOK03D()  
-- loop 3d  
end
```

2) delta time

```
local dt = deltatime() -- get time between 2 frame
```

3) color

```
local id_color = color(255,0,255,20) -- color r=255,g=0,b=255,a=20  
local id_color = color(255,0,200) -- color r=255,g=0,b=200,a=255
```

4) Asset loading

Outside loop / protect for run once

load model

```
loadmodel(path) -- path is string
```

load texture

```
loadtexture(path) -- path is string
```

load plane textured

```
loadplanetexture(texture_name.ext) -- create model plane with loaded texture
```

5) Input

btn / btnp

```
if btn(0) then  
-- key w is down or gamepad left stick up  
elseif btnp(1) then  
-- key s is pressed or gamepad left stick down  
end
```

btn(id) : key is down

btnp(id) : key is pressed

id=0 → key w / gamepad left stick up

id=1 → key s / gamepad left stick down

id=2 → key a / gamepad left stick left

id=3 → key d / gamepad left stick right

id=4 → key x / gamepad button x

id=5 → key c / gamepad button a

mouse

```
local x,y,btnl,btnm,btnr = mouse()  
-- x = x mouse  
-- y = y mouse  
-- btnl = true/false mouse left button  
-- btnm = true/false mouse mid button  
-- btnr = true/false mouse right button
```

6) 2d

work only in ELYOKO2D

draw pixel

```
pix(x, y, color())
```

draw fill rectangle

```
rect(x, y, width, height, color())
```

draw line rectangle

```
rectb(x, y, width, height, color())
```

draw fill circle

```
circle(x, y, radius, color())
```

draw line circle

```
circleb(x, y, radius, color())
```

draw text

```
text(str, x, y, scale, color())
```

unload texture

```
deltexture(name.ext)
```

draw texture

```
drawtexture(name.ext, x, y)
```

7) 3d

work only in ELYOKO3D()

draw cube

```
cube(x, y, z, width, height, depth, color())
```

draw sphere

```
sphere(x, y, z, radius, color())
```

unload model

```
delmodel(name.ext) -- name.ext is name without path
```

draw model

`drawmodel(name.ext, x, y, z, rot_x, rot_y, rot_z) -- rotation in radian`

Table of Contents

Description.....	2
Feature.....	2
Run script CLI.....	2
on window.....	2
on linux.....	2
Entry point.....	2
API.....	3
1) Main loop.....	3
2) delta time.....	3
3) color.....	3
4) Asset loading.....	3
load model.....	3
load texture.....	3
load plane textured.....	3
5) Input.....	3
btn / btnp.....	3
mouse.....	4
6) 2d.....	4
draw pixel.....	4
draw fill rectangle.....	4
draw line rectangle.....	4
draw fill circle.....	4
draw line circle.....	4
draw text.....	4
unload texture.....	4
draw texture.....	4
7) 3d.....	4
draw cube.....	4
draw sphere.....	4
unload model.....	4
draw model.....	5