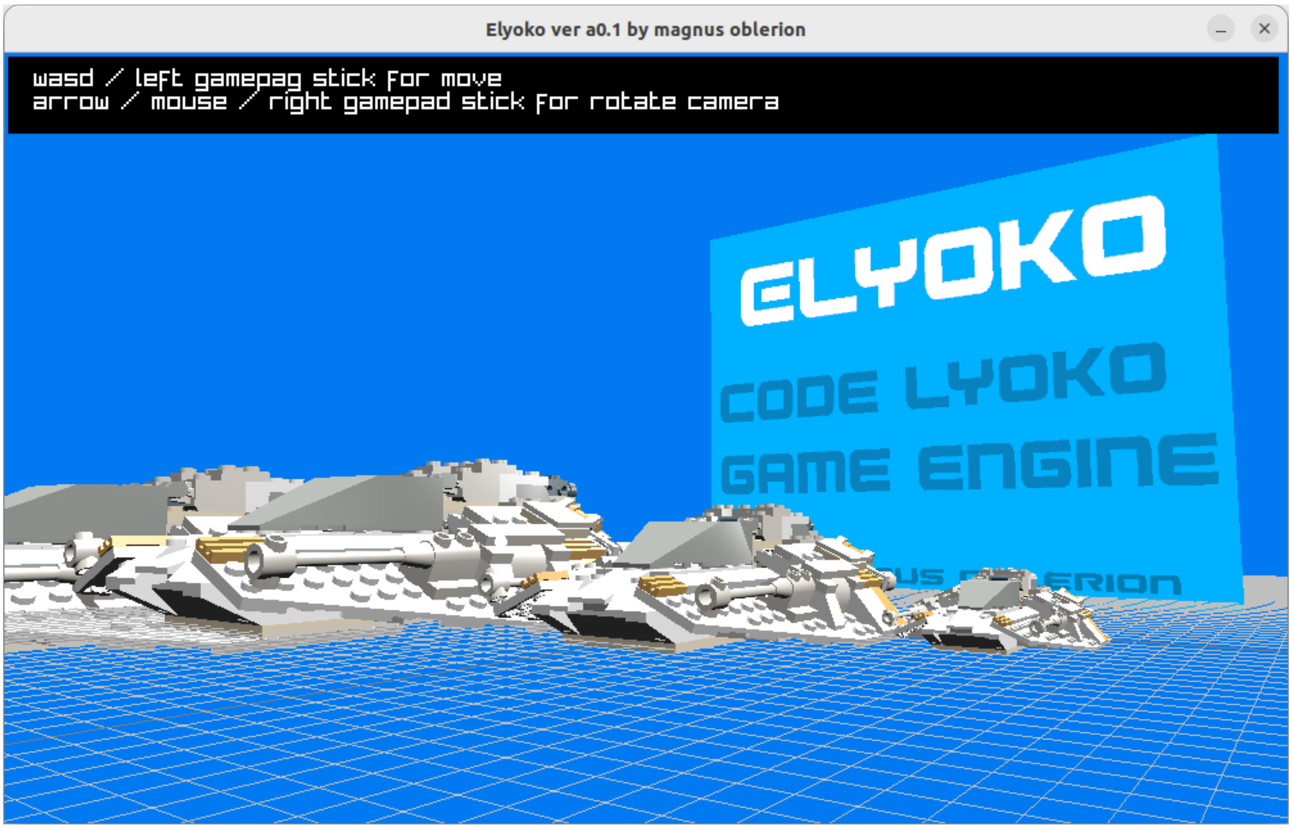
Elyoko

The 3d game engine for

make your lyoko world



Elyoko ver a0.1 by magnus oblerion

wasd / left gamepag stick for move
arrow / mouse / right gamepad stick for rotate camera

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,gltf,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
- move/rotate camera
- 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 ELYOKO2D()
-- loop 2d
end

function ELYOKO3D()
-- 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) camera 3d

get camera X

```
local camx = camerax()
```

get camera Y

```
local camy = cameray()
```

get camera Z

```
local camz = cameraz()
```

camera move

```
cameramove(x, y, z) -- add value to camera position
```

camera set position

```
camerasetpos(x, y, z) -- set value to camera position
```

camera rotate

```
camerarotate(rotx, roty, rotz) -- rotation in radiant
```

Camera set target

```
camerasettarget(x, y, z) -- set points than camera look
```

camera lock

cameralock(state)
-- state=true player can’t move/rotate camera

-- state=false player can move/rotate camera

5) 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
```

6) 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
```

7) 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)`

8) 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, scale)
-- rotation in radian
-- scale > 0 , float multiply scale of model
```

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