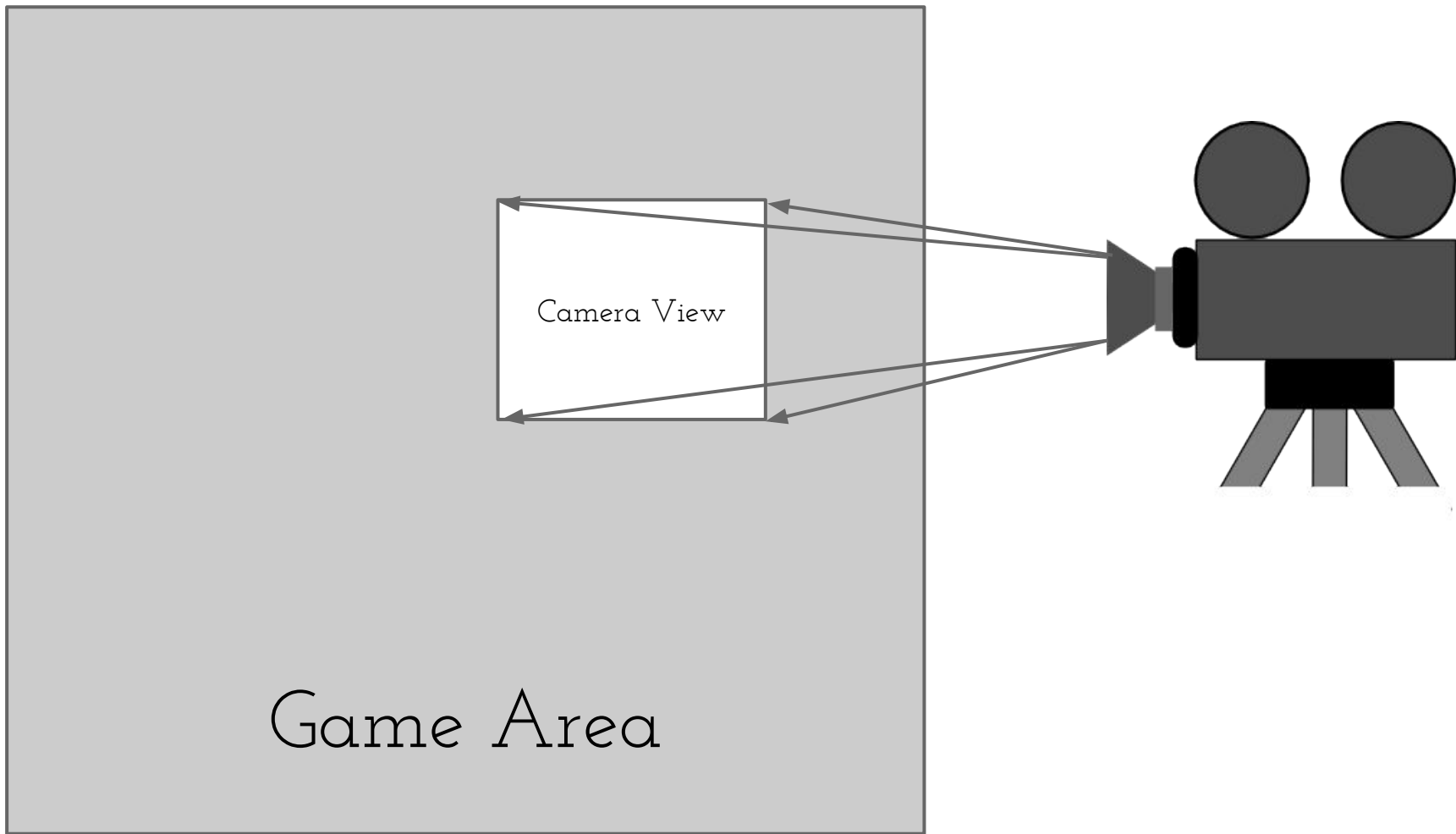


Handling Camera

in love2d

Chouri Soulaymen
<https://praisethemoon.org>



HOW DOES camera
OPERATE?

Simple Animation



Scene 1



Scene 2

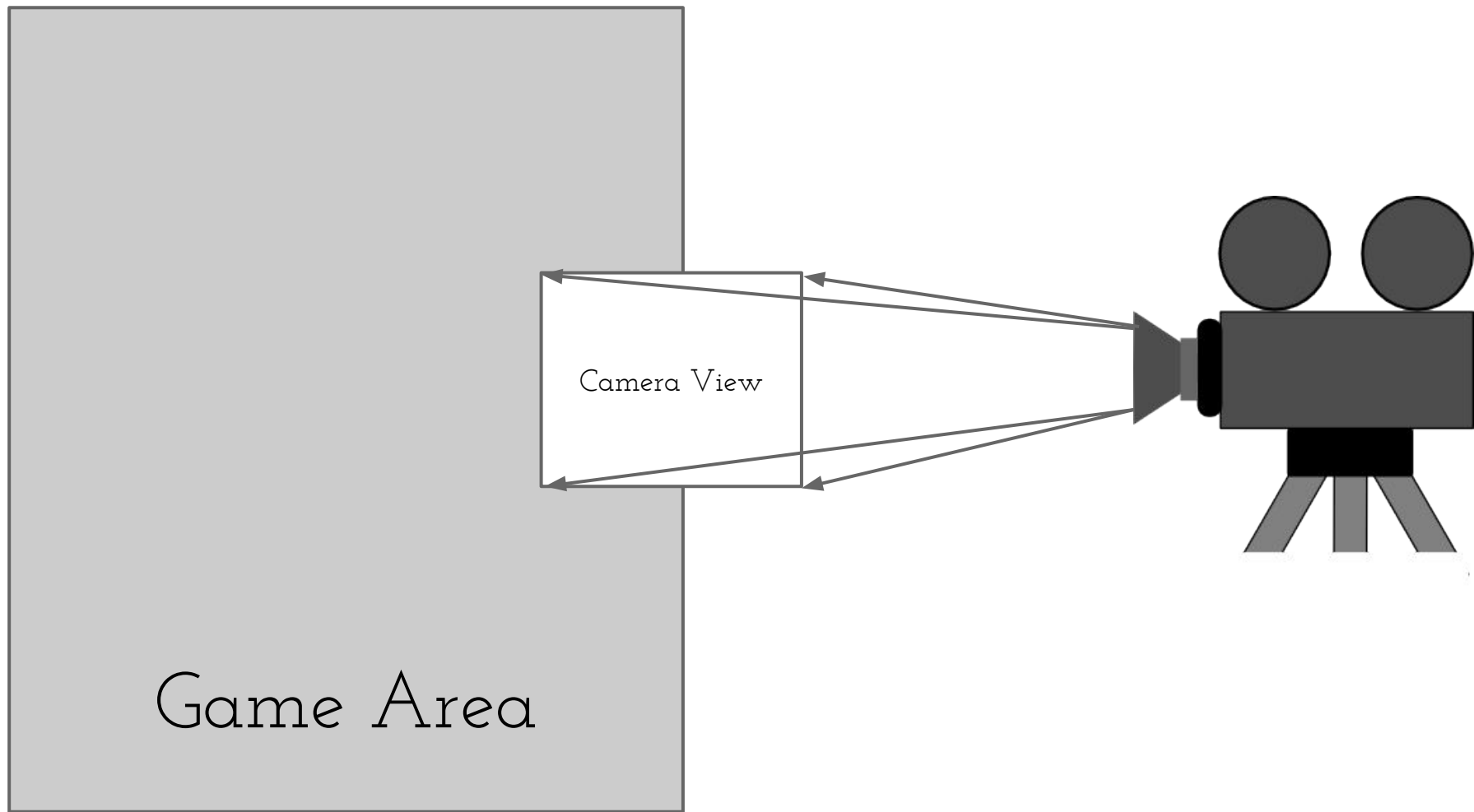


Scene 3

What's our **main object**
in the previous example?

Camera is usually focused
on the main object

Camera must not display
what's outside scene
borders



wrong!

IMPLEMENTATION

Camera Module

camera.Lua

Camera = { }

Initialization


```
local Camera = {  
  x = 0,  
  y = 0,  
  rot = 0,  
  scene = nil,  
}
```

Render to screen

```
function Camera:Render( )  
    love.graphics.push()  
    love.graphics.translate(-self.x, -self.y)  
    self.scene:Render()  
    love.graphics.pop()  
end
```

Update Camera
Position

```
function Camera:SetPos( x, y)  
    self.x = x  
    self.y = y  
end
```

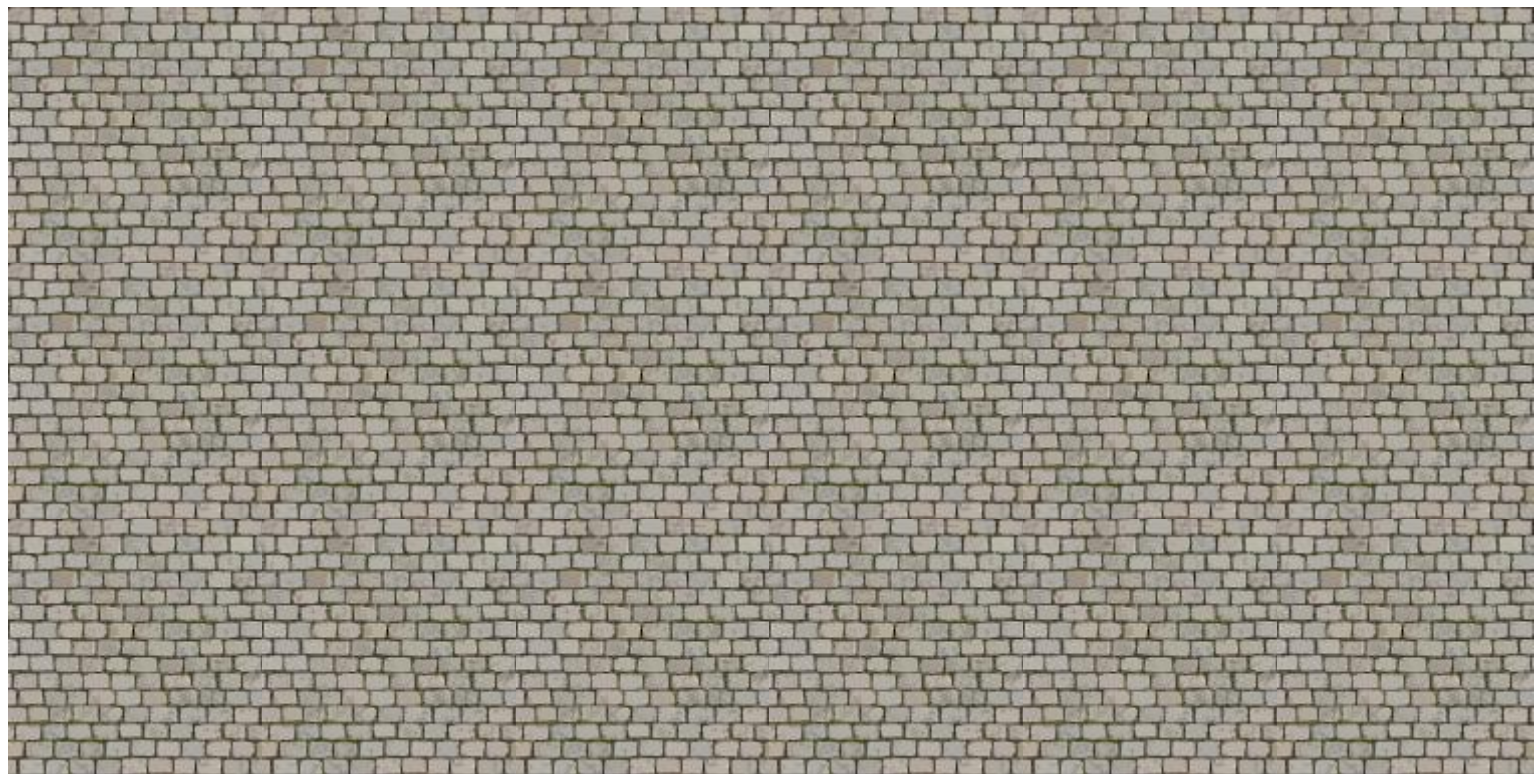
*Done with the
camera*

Creating the
environment

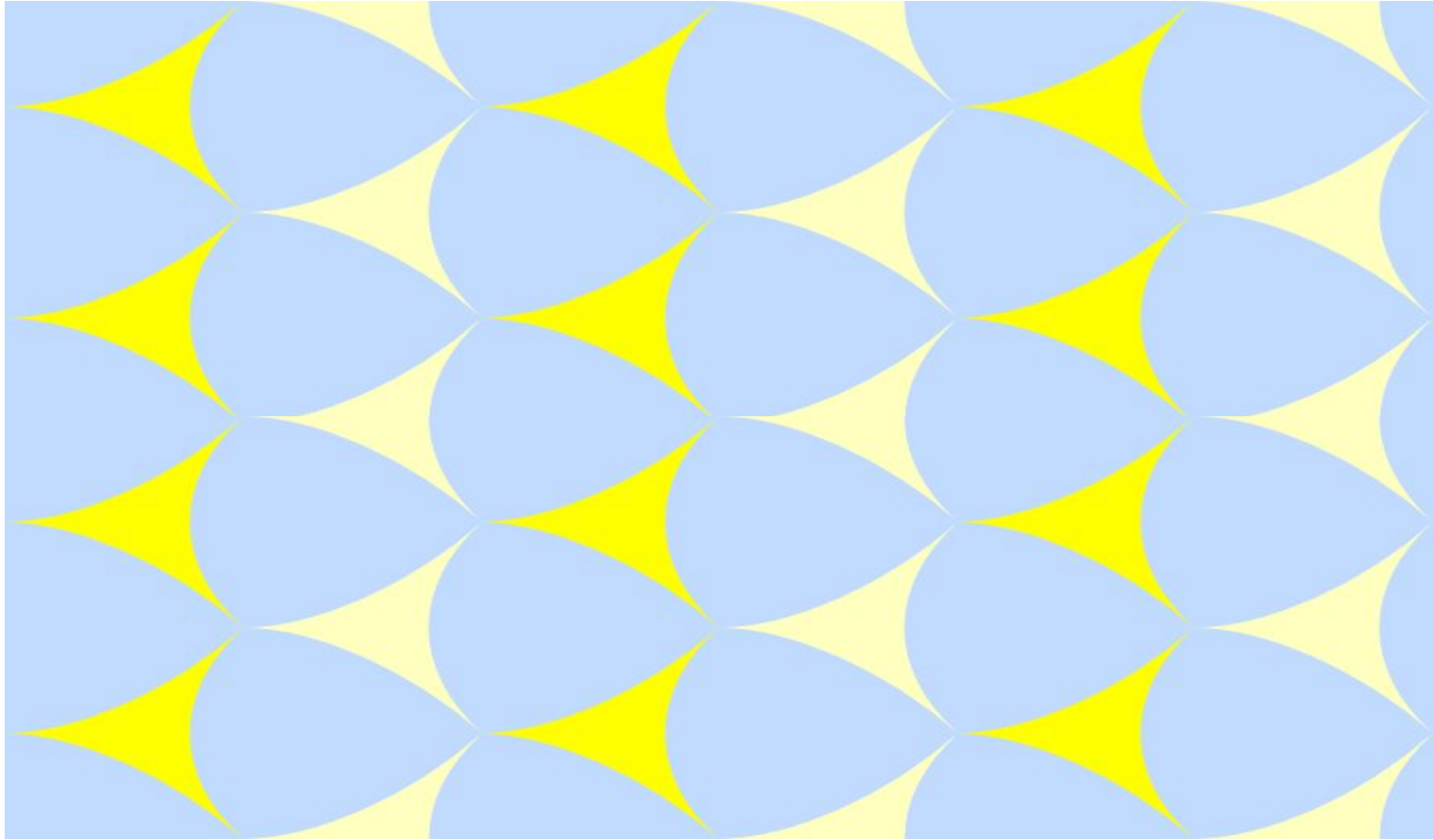
Background:

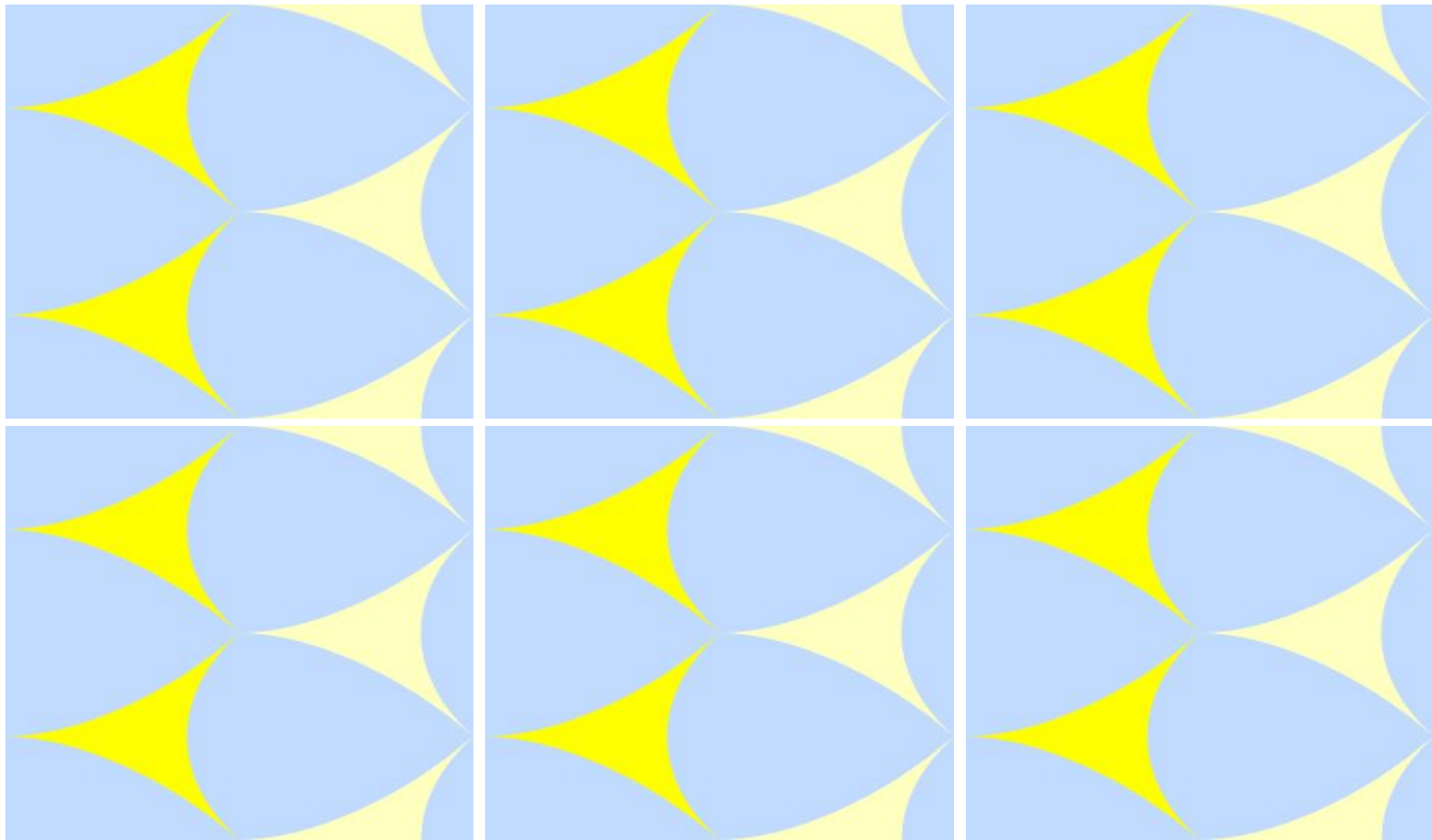
Tiled Image

*What is a tiled
background*

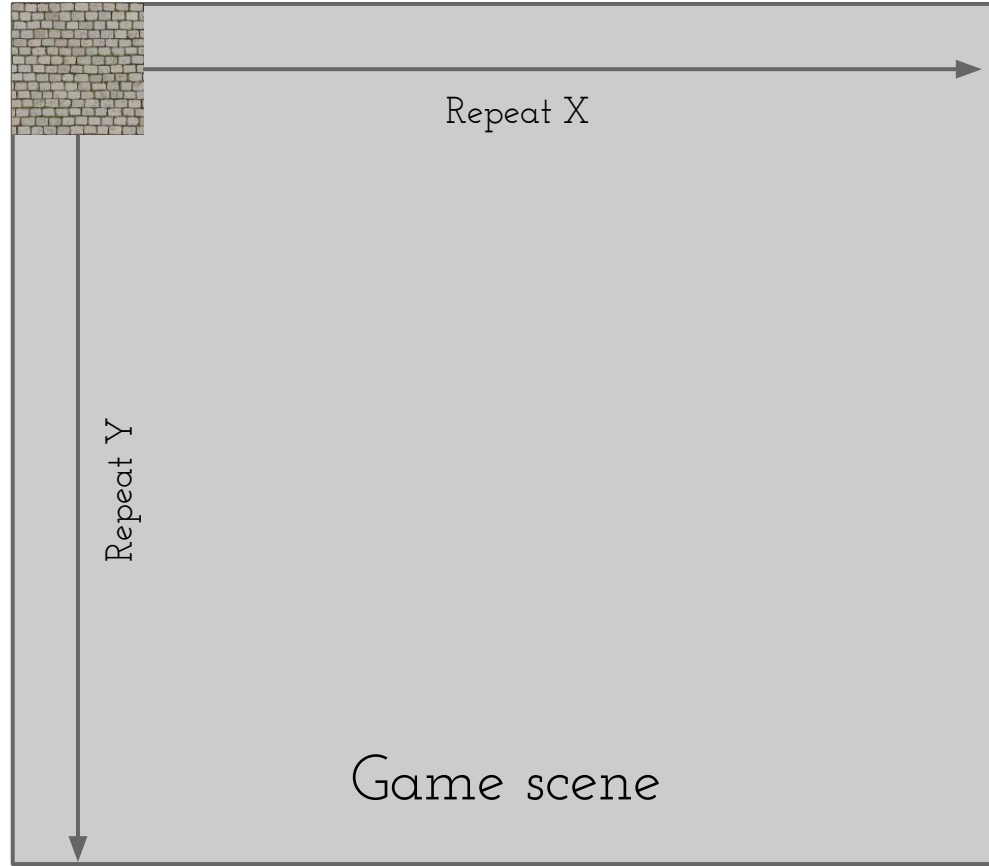


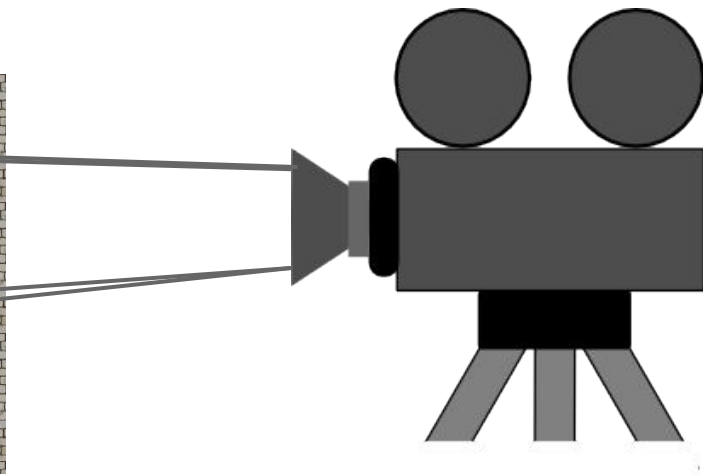






Drawing a tiled
background





OPTIMIZATION

*Few ones are out of
game scene*

*Will not be totally displayed
by our camera*

Task

*Suggest an algorithm to
draw a tiled background*

*Importing our camera
module*

```
require ("camera")
```

Creating our environment

```
local X = love.window.getWidth()
```

```
local Y = love.window.getHeight()
```

```
local world = { x = 2000, y = 2000 }
```

```
local bg = love.graphics.newImage("bg.png")
```

```
function drawBG()  
  x = 0  
  do  
    y = 0  
    do  
      love.graphics.draw(bg, x, y)  
      y = y + bg:getHeight()  
    until y >= world.y  
    x = x + bg:getWidth()  
  until x >= world.x  
end
```


Initializing Camera and Player

```
local player = { }
```

```
local img = love.graphics.newImage("img.png")
```

```
function player:new( )  
    local obj = {  
        x = 0,  
        y = 0,  
    }  
    setmetatable(obj, {__index = player})  
    return obj  
end
```

```
function player:render( )  
    love.graphics.draw(img, self.x, self.y)  
end
```

```
function love.load( )  
    pl = player:new  
    Camera.init()  
end
```

```
local pl = player:new()
```

```
function love.load( )  
    Camera.init()  
    Camera:register(pl)  
    drawBG()  
end
```

Handling Events


```
function love.update( dt )  
    if love.keyboard.isDown("up") then  
        player.y = player.y - 1  
    elseif love.keyboard.isDown("down") then  
        player.y = player.y + 1  
    elseif love.keyboard.isDown("left") then  
        player.x = player.x - 1  
    elseif love.keyboard.isDown("right") then  
        player.x = player.x + 1  
    end
```

```
    Camera.setPos(player.x + X/2, player.y + Y/2)  
end
```

```
function love.draw()  
    Camera.render()  
end
```