Overheat By PaulH

Short lua games, apps and demos using Gideros Mobile SDK. Join us on https://forum.gideros.rocks

This one is a side-scrolling flight game. You're flying an airplane over rugged terrain, but the engine is overheating. As you climb the heat increases, both with rate of climb and with altitude. As you glide it cools down. If it over-heats too much, you lose power.

Graphically it's a 3 layer scrolling landscape, with the mountains you need to clear in the foreground, and two more distant layers of mountains in the background.

How to play: how high you click or touch on the screen controls how sharply the airplane will pitch upwards, and how fast the heat will build up. Touching near the top will turn the plane upwards as quickly as possible, but will also build up heat the fastest. Ending the touch will let the engine cool but the airplane will begin to dive. If you crash, relaunch the game to try again.
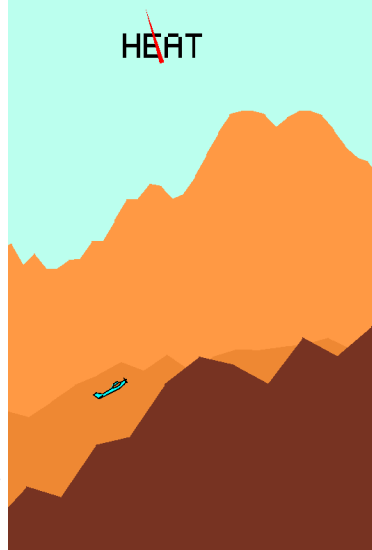
Code

Don't type the line numbers!

```
1    SCREEN_W, SCREEN_H = 320,480
2    function makeShape(p,fcol,px,lcol,scale)
3      local s=Shape.new()
4      s:setLineStyle(px or 0,lcol or 0)
5      s:setFillStyle(Shape.SOLID,fcol)
6      s:beginPath()
7      local sc=scale or 1
8      s:moveTo(p[1]*sc,p[2]*sc)
9      for i = 3, #p,2 do
10         s:lineTo(p[i]*sc,p[i+1]*sc)
11     end
12     s:endPath()
13     return s
14   end
15   local bg = makeShape
       ({0,0,SCREEN_W,0,SCREEN_W,SCREEN_H,0,SCREEN_H,0,0},
       0xbbffee)
16   stage:addChild(bg)
17   LandScroll = gideros.class(Sprite)
18   function LandScroll:init
       (speed,col,min_h,max_h,rugged,block_w)
19     self.speed, self.col, self.min_h, self.max_h,
       self.rugged,
       self.block_w=speed,col,min_h,max_h,rugged,block_w
20     self.right, self.height = -block_w, math.random
       (self.min_h, self.max_h)
21     while self.right < SCREEN_W + self.block_w do
       self:addBlock() end
22     self:addEventListener(Event.ENTER_FRAME,
23         function()
24             self.right-=self.speed*gspeed
25             for i = self:getNumChildren(), 1, -1 do
26                 local ch = self:getChildAt(i)
27                 local x, y = ch:getPosition()
28                 ch:setPosition(x - self.speed*gspeed, y)
29                 if x < 0 - block_w then
30                     ch:removeFromParent()
31                     self:addBlock()
32                 end
33             end
34         end
35     )
36   end
37   function LandScroll:addBlock()
38     local new_h = math.min(self.max_h, math.max
       (self.min_h, self.height + math.random(-20, 20) *
       0.001 * self.rugged))
39     local s=makeShape({0, SCREEN_H*(1-
       self.height),self.block_w+1,SCREEN_H*(1-
       new_h),self.block_w+1, SCREEN_H,0,
       SCREEN_H,0,0},self.col)
40     s:setAnchorPoint(0,1)
41     s:setPosition(self.right, SCREEN_H)
42     self.right+=self.block_w
43     self:addChild(s)
44     s.start_height, s.end_height = self.height, new_h
45     self.height = new_h
46   end
47   function LandScroll:getHeight(x)
48     local h = 0
49     for i = 1, self:getNumChildren() do
50         local ch = self:getChildAt(i)
51         local chx, chy = ch:getPosition()
52         if x >= chx and x <= chx + self.block_w then
53             h = ch.start_height + (ch.end_height -
       ch.start_height) * (x - chx) / self.block_w
54             break
55         end
56     end
57     return (1-h)*SCREEN_H
58   end
59   stage:addChild(LandScroll.new(0.1,0xff9944,0.5,
       0.8,2,10))
60   stage:addChild(LandScroll.new(0.3,0xee8833,0.2,
       0.7,1.5,20))
61   t1=LandScroll.new(1,0x773322,0.05,0.6,5,30)
62   stage:addChild(t1)
63   plane=makeShape
```

```lua
      ({0,0,3,0,6,3,7,4,15,4.5,18,4,20,2.2,23.5,2.5,24,4,
      18,4,17,5,20,6,24,6,26,5,24,4,26,5,30,5,31,5.5,30,6
      ,30,3,30,8,
 64     30,5,30,6,29,7.5,27,8,21,8.5,20,8.2,4,6,2,5.5,1.7,
      5,6.5,5,6.4,5.2,1.7,5,0,0},0x00ffff,1,0,1)
 65   plane:setAnchorPoint(0.75,0.5)
 66   stage:addChild(plane)
 67   px,py = SCREEN_W * 0.3, SCREEN_H * 0.2
 68   heat_tf=TextField.new(null,"HEAT")
 69   stage:addChild(heat_tf)
 70   heat_tf:setPosition(100, 50)
 71   heat_tf:setScale(3)
 72   needle=makeShape({2,0,4,50,0,50,2,0},0xff0000)
 73   needle:setPosition(132,55)
 74   stage:addChild(needle)
 75   needle:setAnchorPoint(0,1)
 76   heat,max_heat,climb=0,200,0
 77   gspeed,climb = 1,0
 78   function on_enter_frame()
 79     if not game_over then
 80        if in_y and heat < max_heat then
 81            climb -= ((in_y > SCREEN_H * 0.5 and 1) or
      -1) * 0.01
 82            heat+=(SCREEN_H - py)/ SCREEN_H * 2
 83        else
 84            heat=math.max(0, heat-1) climb-=0.01
 85        end
 86        py = math.min(SCREEN_H, math.max(SCREEN_H *
      0.1, py - climb))
 87        plane:setPosition(px, py)
 88        local h=t1:getHeight(px)
 89        if py>h then py=h game_over=1 gspeed=0 end
 90        plane:setRotation(climb*-30)
 91        needle:setRotation(heat/max_heat*180-90)
 92     end
 93   end
 94   stage:addEventListener(Event.ENTER_FRAME,
      on_enter_frame)
 95   stage:addEventListener(Event.MOUSE_DOWN, function
      (e) in_y = e.y end)
 96   stage:addEventListener(Event.MOUSE_MOVE, function
      (e) in_y = e.y end)
 97   stage:addEventListener(Event.MOUSE_UP, function()
      in_y = nil end)
```