



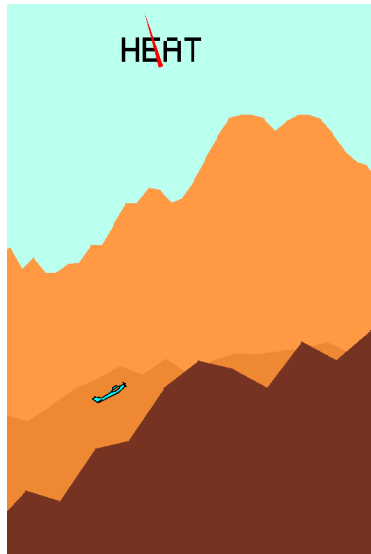
Overheat

 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 overheats 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,fc0l,px,lcol,scale)
3     local s=Shape.new()
4     s:setLineStyle(px or 0,lcol or 0)
5     s:setFillStyle(Shape.SOLID,fc0l)
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
16     ({0,0,SCREEN_W,0,SCREEN_W,SCREEN_H,0,SCREEN_H,0,0},
17     0xbbffee)
16 stage:addChild(bg)
17 LandScroll = gideros.class(Sprite)
```

```
18 function LandScroll:init
19     (speed,col,min_h,max_h,rugged,block_w)
20     self.speed, self.col, self.min_h, self.max_h,
21     self.rugged,
22     self.block_w=speed,col,min_h,max_h,rugged,block_w
23     self.right, self.height = -block_w, math.random
24     (self.min_h, self.max_h)
25     while self.right < SCREEN_W + self.block_w do
26         self:addBlock() end
27     self:addEventListener(Event.ENTER_FRAME,
28     function()
29         self.right-=self.speed*gspeed
30         for i = self:getNumChildren(), 1, -1 do
31             local ch = self:getChildAt(i)
32             local x, y = ch:getPosition()
33             ch:setPosition(x - self.speed*gspeed, y)
34             if x < 0 - block_w then
35                 ch:removeFromParent()
36                 self:addBlock()
37             end
38         end
39     end
40     )
41 end
42 function LandScroll:addBlock()
43     local new_h = math.min(self.max_h, math.max
44     (self.min_h, self.height + math.random(-20, 20) *
45     0.001 * self.rugged))
46     local s=makeShape({0, SCREEN_H*(1-
47     self.height),self.block_w+1,SCREEN_H*(1-
48     new_h),self.block_w+1, SCREEN_H,0,
49     SCREEN_H,0,0},self.col)
50     s:setAnchorPoint(0,1)
51     s:setPosition(self.right, SCREEN_H)
52     self.right+=self.block_w
53     self:addChild(s)
54     s.start_height, s.end_height = self.height, new_h
55     self.height = new_h
56 end
57 function LandScroll:getHeight(x)
58     local h = 0
59     for i = 1, self:getNumChildren() do
60         local ch = self:getChildAt(i)
61         local chx, chy = ch:getPosition()
62         if x >= chx and x <= chx + self.block_w then
63             h = ch.start_height + (ch.end_height -
64             ch.start_height) * (x - chx) / self.block_w
65             break
66         end
67     end
68     return (1-h)*SCREEN_H
69 end
70 stage:addChild(LandScroll.new(0.1,0xff9944,0.5,
71     0.8,2,10))
72 stage:addChild(LandScroll.new(0.3,0xee8833,0.2,
73     0.7,1.5,20))
74 t1=LandScroll.new(1,0x773322,0.05,0.6,5,30)
75 stage:addChild(t1)
76 plane=makeShape
```

```

({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)

```