

SWINBURNE UNIVERSITY OF TECHNOLOGY

2021 SEM 1 INTRODUCTION TO PROGRAMMING

DOUBTFIRE SUBMISSION

Hover Button

Submitted By:

Hong Que VO

102240620

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Tutor:

Tuan Dung LAI

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```
1  require 'rubygems'
2  require 'gosu'
3
4
5  module ZOrder
6      BACKGROUND, MIDDLE, TOP = *0..2
7  end
8
9  # Global constants
10 WIN_WIDTH = 640
11 WIN_HEIGHT = 400
12
13
14 class DemoWindow < Gosu::Window
15
16     # set up variables and attributes
17     def initialize
18         super(WIN_WIDTH, WIN_HEIGHT, false)
19         @background = Gosu::Color::WHITE
20         @button_font = Gosu::Font.new(20)
21         @info_font = Gosu::Font.new(10)
22         @locs = [60,60]
23     end
24
25     # Draw the background, the button with 'click me' text and text
26     # showing the mouse coordinates
27     def draw
28         # Draw background color
29         Gosu.draw_rect(0, 0, WIN_WIDTH, WIN_HEIGHT, @background, ZOrder::BACKGROUND,
30             ↪ mode=:default)
31         if mouse_over_button(mouse_x, mouse_y)
32             Gosu.draw_rect(48, 48, 115, 55, Gosu::Color::BLACK, ZOrder::MIDDLE,
33                 ↪ mode=:default)
34         end
35         # Draw the button
36         Gosu.draw_rect(50, 50, 110, 50, Gosu::Color::GREEN, ZOrder::TOP, mode=:default)
37         # Draw the button text
38         @button_font.draw("Click me", 60, 60, ZOrder::TOP, 1.0, 1.0, Gosu::Color::BLACK)
39         # Draw the mouse position information
40         @info_font.draw_markup("mouse_x: #{mouse_x}", 20, 350, ZOrder::TOP, 1.0, 1.0,
41             ↪ Gosu::Color::BLACK)
42         @info_font.draw_markup("mouse_y: #{mouse_y}", 100, 350, ZOrder::TOP, 1.0, 1.0,
43             ↪ Gosu::Color::BLACK)
44     end
45
46     # this is called by Gosu to see if should show the cursor (or mouse)
47     def needs_cursor?
48         true
49     end
50
51     # If the button area (rectangle) has been clicked on change the background color
```

```
50  # also store the mouse_x and mouse_y attributes that we 'inherit' from Gosu
51  # you will learn about inheritance in the OOP unit - for now just accept that
52  # these are available and filled with the latest x and y locations of the mouse
    ↪ click.
53
54  def mouse_over_button(mouse_x, mouse_y)
55      if ((mouse_x > 50 && mouse_x < 160) && (mouse_y > 50 && mouse_y < 100))
56          true
57      else
58          false
59      end
60  end
61
62
63  # <----- ADD THIS METHOD ----->
64  def mouse_over_button(mouse_x, mouse_y)
65      if ((mouse_x > 50 && mouse_x < 160) && (mouse_y > 50 && mouse_y < 100))
66          true
67      else
68          false
69      end
70  end
71
72
73  # Where is mouse_x and mouse_y defined
74
75  def button_down(id)
76      case id
77      when Gosu::MsLeft
78          if mouse_over_button(mouse_x, mouse_y)
79              @background = Gosu::Color::YELLOW
80              #Gosu.draw_rect(48, 48, 115, 55, Gosu::Color::BLACK, ZOrder::MIDDLE,
    ↪ mode=:default)
81          else
82              @background = Gosu::Color::WHITE
83          end
84      end
85  end
86  end
87
88  # Lets get started!
89  DemoWindow.new.show
```



Click me

mouse_x: -41.0 mouse_y: 119.0