

SWINBURNE UNIVERSITY OF TECHNOLOGY

2021 SEM 1 INTRODUCTION TO PROGRAMMING

DOUBTFIRE SUBMISSION

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# Shape Moving

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2021/04/16 19:19

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April 16, 2021



```
1  require 'gosu'
2
3  module ZOrder
4    BACKGROUND, MIDDLE, TOP = *0..2
5  end
6
7  WIDTH = 400
8  HEIGHT = 500
9  SHAPE_DIM = 50
10
11  # Instructions:
12  # Fix the following code so that:
13  # 1. The shape also can be moved up and down
14  # 2. the shape does not move out of the window area
15
16  class GameWindow < Gosu::Window
17
18    # initialize creates a window with a width an a height
19    # and a caption. It also sets up any variables to be used.
20    # This is procedure i.e the return value is 'undefined'
21    def initialize
22      super WIDTH, HEIGHT, false
23      self.caption = "Shape Moving"
24
25      @shape_y = HEIGHT / 2
26      @shape_x = WIDTH / 2
27
28    end
29
30    # Put any work you want done in update
31    # This is a procedure i.e the return value is 'undefined'
32    def update
33
34      if button_down?(Gosu::KbDown)
35        if @shape_y != (WIDTH - SHAPE_DIM) && (@shape_y < 450)
36          @shape_y += 3
37        end
38      end
39      if button_down?(Gosu::KbUp) && (@shape_y > 0)
40        @shape_y -= 3
41      end
42
43      if button_down?(Gosu::KbRight)
44        if @shape_x != (WIDTH - SHAPE_DIM)
45          @shape_x += 3
46        end
47      end
48      if button_down?(Gosu::KbLeft) && (@shape_x >= 0)
49        @shape_x -= 3
50      end
51    end
52
53  end
```

```
54  end
55
56  # Draw (or Redraw) the window
57  # This is procedure i.e the return value is 'undefined'
58  def draw
59      Gosu.draw_rect(@shape_x, @shape_y, SHAPE_DIM, SHAPE_DIM, Gosu::Color::RED,
        ↪  ZOrder::TOP, mode=:default)
60  end
61 end
62
63 window = GameWindow.new
64 window.show
```

