

SWINBURNE UNIVERSITY OF TECHNOLOGY

2021 SEM 1 INTRODUCTION TO PROGRAMMING

DOUBTFIRE SUBMISSION

---

# Simple GUI Music Player

---

*Submitted By:*

Hong Que VO

102240620

2021/05/11 19:40

*Tutor:*

Tuan Dung LAI

May 11, 2021



```
1  require 'rubygems'
2  require 'gosu'
3
4  TOP_COLOR = Gosu::Color.new(0xFF1EB1FA)
5  BOTTOM_COLOR = Gosu::Color.new(0xFF1D4DB5)
6
7  module ZOrder
8    BACKGROUND, PLAYER, UI = *0..2
9  end
10
11  SCREEN_WIDTH = 600
12  SCREEN_HEIGHT = 800
13
14  module Genre
15    POP, CLASSIC, JAZZ, ROCK = *1..4
16  end
17
18  GENRE_NAMES = ['Null', 'Pop', 'Classic', 'Jazz', 'Rock']
19
20  class ArtWork
21    attr_accessor :bmp
22
23    def initialize (file)
24      @bmp = Gosu::Image.new(file)
25
26    end
27  end
28
29  class Album
30    attr_accessor :name, :artist, :artwork, :tracks
31
32    def initialize(name, artist, artwork, tracks)
33      @name = name
34      @artist = artist
35      @artwork = artwork
36      @tracks = tracks
37
38    end
39  end
40
41  class Track
42    attr_accessor :track_name, :track_location
43    def initialize(track_name, track_location)
44      @track_name = track_name
45      @track_location = track_location
46    end
47  end
48
49  # Put your record definitions here
50
51  class MusicPlayerMain < Gosu::Window
52
53    def initialize
```

```

54         super 600, 800
55         self.caption = "Music Player"
56         a_file = File.new("input.txt", "r")
57         @albums = read_album(a_file)
58         a_file.close
59         #@track = read_track(a_file)
60         @songs = Array.new()
61         @albums.tracks.each do |track|
62             @song = Gosu::Song.new(track.track_location)
63             #@song.play(looping = true)
64             @songs.push(@song)
65         end
66         @index = 0
67         #@songs.push(@song)
68         @started = false
69         @track_font = Gosu::Font.new(40)
70
71
72         #albums.push(track.track_location)
73         # Reads in an array of albums from a file and then prints all the albums in
74         ↪ the
75         # array to the terminal
76     end
77
78     # Put in your code here to load albums and tracks
79
80
81     def read_track(a_file)
82         track_name = a_file.gets().chomp()
83         track_location = a_file.gets().chomp()
84         track = Track.new(track_name, track_location)
85         track.track_name = track_name
86         puts track_name
87         track.track_location = track_location
88         return track
89     end
90
91     def read_tracks(a_file)
92         count = a_file.gets().to_i()
93         tracks = Array.new()
94         while count > 0 do
95             track = read_track(a_file)
96             tracks << track
97             count -= 1
98         end
99
100         return tracks
101     end
102
103     def read_album(a_file)
104         name = a_file.gets().chomp()
105         artist = a_file.gets().chomp()

```

```
106     artwork = ArtWork.new(a_file.gets().chomp())
107     tracks = read_tracks(a_file)
108     album = Album.new(name, artist, artwork, tracks)
109     #album.name = name
110     #album.artist = artist
111     #album.genre = genre
112     #album.tracks = tracks
113
114     return album
115 end
116
117 def print_album(album)
118     puts(album.name)
119 end
120
121
122
123
124 # Draws the artwork on the screen for all the albums
125
126 def draw_albums
127     @album_image = Gosu::Image.new("image/dive.jpg", :tileable => true)
128
129     # complete this code
130 end
131
132 def print_tracks(tracks)
133     index = 0
134
135     while index < tracks.length
136
137         print_track(tracks[index])
138         index +=1
139     end
140
141 end
142
143 def print_track(track)
144     puts(track.track_name)
145
146 end
147
148
149
150
151 # Detects if a 'mouse sensitive' area has been clicked on
152 # i.e either an album or a track. returns true or false
153
154 def area_clicked(leftX, topY, rightX, bottomY)
155     # complete this code
156     if ((mouse_x > leftX && mouse_x < rightX) && (mouse_y > topY && mouse_y <
        ↪ bottomY))
157         true
158     end
159 end
```

```
158         else
159             false
160         end
161     end
162
163
164
165
166     # Takes a String title and an Integer ypos
167     # You may want to use the following:
168     def display_track()
169         trackLeftX = 300
170         ypos = 0
171
172         @albums.tracks.each do |track|
173             title = track.track_name
174             ypos += 50
175
176             @track_font.draw_text(title, trackLeftX, ypos, ZOrder::PLAYER, 1.0,
177                 ↪ 1.0, Gosu::Color::WHITE)
178
179         end
180
181         ytext = @index *48 + 60
182         draw_rect(trackLeftX - 20 , ytext + 5, 13 ,13 ,Gosu::Color::RED, z=30 )
183         #@track_font = Gosu::Image.from_text();
184     end
185
186
187
188     def playTrack(songs, index)
189
190         if index < songs.length
191             #song = Gosu::Song.new(tracks[index].track_location)
192             songs[index].play
193         else
194             @started = false
195         end
196
197
198
199     end
200
201
202
203
204     def draw_background
205         @background_image = Gosu::Image.new("image/space.png", :tileable => true)
206     end
207
208
209     def update
```

```
210
211     if(!@songs[@index].playing? && @started)
212         @index += 1
213         playTrack(@songs, @index)
214     end
215 end
216
217
218 def draw
219     draw_background()
220     @background_image.draw(0, 0, ZOrder::BACKGROUND)
221
222     draw_albums()
223     @album_image.draw( 50, 50, ZOrder::PLAYER)
224
225
226     display_track
227
228 end
229
230     def needs_cursor?; true; end
231
232
233 def button_down(id)
234     case id
235     when Gosu::MsLeft
236         # What should happen here?
237         if area_clicked(50 ,50 ,270 ,270)
238             @started = true
239             @index = 0
240             playTrack(@songs, @index)
241         else
242             false
243         end
244     end
245 end
246
247 end
248
249 # Show is a method that loops through update and draw
250
251 MusicPlayerMain.new.show if __FILE__ == $0
```

Music Player



■ Galway Girl  
Beautiful People  
Perfect