

# Programming Fundamentals

## Lecture 08 – Music and Audio Effects

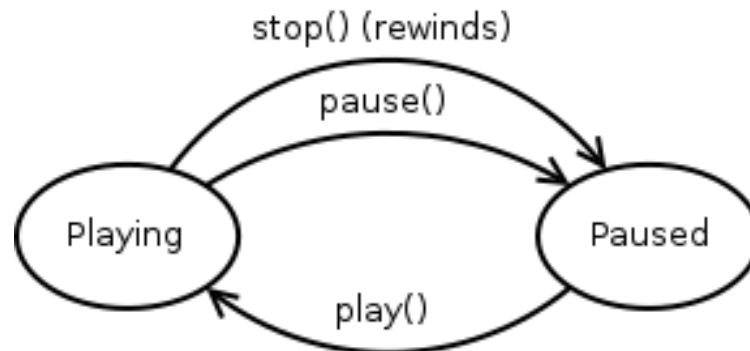
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# Music and Audio Effects

- The `love.audio` module provides an interface to output sound to the user's speakers.
- Audio workflow:



# Music and Audio Effects

- Löve functions to handle audio:

- Load a new audio source:

```
source = love.audio.newSource(filename, type)
```

- Play an audio source:

```
love.audio.play(source)
```

- Stop an audio source:

```
love.audio.stop(source)
```

- Pause an audio source:

```
love.audio.pause(source)
```

More functions: <https://love2d.org/wiki/love.audio>

# Music and Audio Effects

- It's also possible to control each audio source individually:

- Play an audio source:

```
success = source:play()
```

- Stop an audio source:

```
source:stop()
```

- Pause an audio source:

```
source:pause()
```

- Check if the audio is playing:

```
playing = source:isPlaying( )
```

# Music and Audio Effects

- It's also possible to control each audio source individually:
  - Sets whether the audio source should loop:

```
source:setLooping(loop)
```

- Sets the current volume of the audio source:

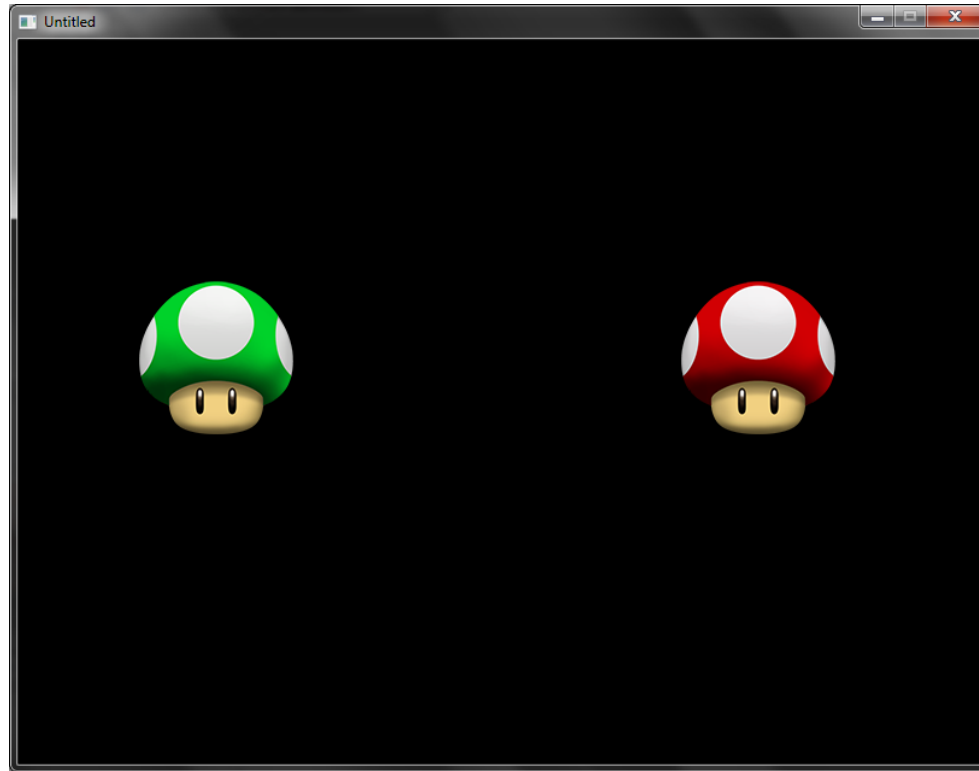
```
source:setVolume(volume)
```

- Sets the currently playing position of the audio source:

```
source:seek(offset, unit)
```

More functions: <https://love2d.org/wiki/Source>

# Music and Audio Effects – Example



[http://www.inf.puc-rio.br/~elima/intro-eng/exemplo\\_audio.zip](http://www.inf.puc-rio.br/~elima/intro-eng/exemplo_audio.zip)

# Music and Audio Effects – Example

```
local icon_1up
local icon_super
local audio_1up
local audio_super

function love.load()
    icon_1up = love.graphics.newImage("1up.png")
    icon_super = love.graphics.newImage("super.png")
    audio_1up = love.audio.newSource("1up.mp3", "static")
    audio_super = love.audio.newSource("super.mp3")
end

function CheckClick(x1,y1,w1,h1,x2,y2)
    return x1 < x2+1 and x2 < x1+w1 and y1 < y2+1 and y2 < y1+h1
end

function love.draw()
    love.graphics.draw(icon_1up, 100, 200)
    love.graphics.draw(icon_super, 550, 200)
end
```

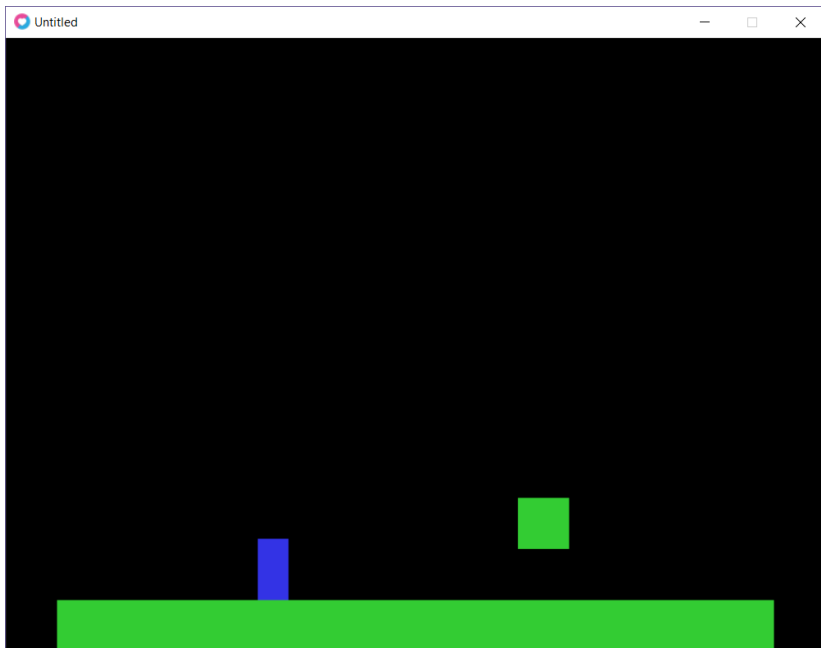
# Music and Audio Effects – Example

```
function love.mousepressed(x, y, button)
  if button == 1 then
    if CheckClick(550,200,128,128,x,y) then
      love.audio.play(audio_super)
    end
    if CheckClick(100,200,128,128,x,y) then
      love.audio.play(audio_lup)
    end
  elseif button == 2 then
    if CheckClick(550,200,128,128,x,y) then
      love.audio.stop(audio_super)
    end
    if CheckClick(100,200,128,128,x,y) then
      love.audio.stop(audio_lup)
    end
  end
end
end
```



# Exercise 1

- 1) Add a background music and a jump sound to the “Collision Detection with Physics” example program.
  - Search for free music and jump sounds on the internet.
  - The background music must be played in a loop.



## Audio Resources:

- <https://incompetech.com/music/royalty-free/>
- <https://opengameart.org/>
- <https://freesound.org/browse/>
- <http://soundbible.com/>