

# Piscine Swift - Day 09

## This Is Me Now

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*Summary: This document contains the subject for Day for the "Piscine Swift" from 42*

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# Chapter I

## Foreword

From the Musical Jekyll and Hyde

ENSEMBLE:

There's a face that we wear  
In the cold light of day -  
It's society's mask,  
It's society's way,  
And the truth is  
That it's all a façade!

There's a face that we hide  
Till the nighttime appears,  
And what's hiding inside,  
Behind all of our fears,  
Is our true self,  
Locked inside the façade!

Every day  
People, in their own sweet way,  
Like to add a coat of paint,  
And be what they ain't!

That's how our little -  
Game is played,  
Livin' like a masquerade  
Actin' a bizarre charade -  
While playing the saint!

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So, what is the sinister secret?  
The lie he will tell you is true? -  
It's that each man you meet  
In the street  
Isn't one man but two!

# Chapter II

## General Instructions

- Only this document will serve as reference. Do not trust rumors.
- Read carefully the whole subject before beginning.
- Watch out! This document could potentially change up to an hour before submission.
- This project will be corrected by humans only.
- This course is designed to build on previous days' concepts, try your hardest to finish everyday.
- Each day culminates in a portfolio piece, if you finish the day this is something you can use to get hired.
- When submitting, submit the folder of the Xcode project.
- Only the work submitted on the repository will be accounted for during peer-2-peer correction.
- Here it is the [official manual of Swift](#) and the [Swift Standard Library](#)
- It is forbidden to use other libraries, packages, pods, etc. Unless otherwise stated in the project.
- Got a question? Ask your peer on the right. Otherwise, try your peer on the left.
- You can discuss on the Piscine forum of your Intra!
- By Odin, by Thor! Use your brain!!!

# Chapter III

## Introduction

This assignment requires a physical test device with a front facing (TrueDepth) camera. If you don't have one try to team up with someone who does, If this is not possible then you should do the alternate day 09 assignment.

Today we are using Augmented Reality (AR) to build an emoji face mask (similar in concept to how snapchat filters work). The Iphone has fairly good facial recognition already built in so we will be using that. To do this we will learn about face tracking and how to use our face to control which emoji shows. Later adding complexity and other modes as well.

## Chapter IV

### Exercise 00 : Face Tracking

Exercise : 00
Face Tracking
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit, ARKit, ARFaceAnchor, ARFaceGeometry, ARSCNFaceGeometry
Notes : n/a

Create an app that shows face anchors and geometries.

# Chapter V

## Exercise 01 : Emoji Masks

Exercise : 01
Emoji Masks
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit
Notes : n/a

Now using the face anchors and geometries in the last assignment we are going to create an emoji overlay to mask our face.

## Chapter VI

### Exercise 02: With a Wink & a Smile

Exercise : 02
With a Wink & a Smile
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit
Notes : n/a

Now we are going to use facial gestures to change which emoji displays as our mask. Winking will change it to a winky face, a second wink will reset it back to the default smile. A frown will change it to a frowning face etc.



## Chapter VII

### Exercise 03: Record Video & Snapshot

Exercise : 03
Record Video & Snapshot
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit
Notes : n/a

We want to be able to save and record what shows on our camera, or rather what is outputted to the screen.

## Chapter VIII

### Exercise 04: My Emoji Face

Exercise : 04
My Emoji Face
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit
Notes : n/a

Now we create buttons that when pushed will overlay different emoji masks, removing the current one and overlaying the selected one. We should be able to have a sense the face mode adapting to the face we are making or allowing us to choose whichever face emoji we want.

## Chapter XI

### Bonus : Send To Friends

Bonus
Send To Friends
Files to turn in: .xcodeproj and all necessary files
Allowed functions : Swift Standard Library, UIKit
Notes : n/a

Using what we've learned in previous days see if we can send the video of our emoji maks to other devices (much like messaging before, but this time with video).