Piscine iOS Swift - Day 07

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Summary: This document contains the subject for Day 07 for the „Piscine iOS Swift" from 42

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Chapter I

Foreword

Voici la page wikipedia sur l'Intelligence Artificielle :

Artificial intelligence (AI, also machine intelligence, MI) is apparently intelligent behaviour by machines, rather than the natural intelligence (NI) of humans and other animals. In computer science AI research is defined as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of success at some goal. Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning and problem solving".

The scope of AI is disputed: as machines become increasingly capable, tasks considered as requiring "intelligence" are often removed from the definition, a phenomenon known as the AI effect, leading to the quip "AI is whatever hasn't been done yet." For instance, optical character recognition is frequently excluded from "artificial intelligence", having become a routine technology. Capabilities generally classified as AI as of 2017 include successfully understanding human speech, competing at a high level in strategic game systems (such as chess and Go), autonomous cars, intelligent routing in content delivery networks, military simulations, and interpreting complex data.

Artificial intelligence was founded as an academic discipline in 1956, and in the years since has experienced several waves of optimism, followed by disappointment and the loss of funding (known as an "AI winter"), followed by new approaches, success and renewed funding. For most of its history, AI research has been divided into subfields that often fail to communicate with each other. However, in the early 21st century statistical approaches to machine learning became successful enough to eclipse all other tools, approaches, problems and schools of thought.

The traditional problems (or goals) of AI research include reasoning, knowledge, planning, learning, natural language processing, perception and the ability to move and manipulate objects. General intelligence is among the field's long-term goals. Approaches include statistical methods, computational intelligence, and traditional symbolic AI. Many tools are used in AI, including versions of search and mathematical optimization, neural networks and methods based on statistics, probability and economics. The AI field draws upon computer science, mathematics, psychology, linguistics, philosophy, neuroscience, artificial psychology and many others.

The field was founded on the claim that human intelligence “can be so precisely described that a machine can be made to simulate it”. This raises philosophical arguments about the nature of the mind and the ethics of creating artificial beings endowed with human-like intelligence, issues which have been explored by myth, fiction and philosophy since antiquity. Some people also consider AI a danger to humanity if it progresses unabatedly.

In the twenty-first century, AI techniques have experienced a resurgence following concurrent advances in computer power, large amounts of data, and theoretical understanding; and AI techniques have become an essential part of the technology industry, helping to solve many challenging problems in computer science.

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.
- The document can be relied upon, do not blindly trust the demos which can contain unrequired additions.
- You will have to submit one app every day (except for Day 01) on your git repository, submit the folder of the Xcode project.
- Here it is the official manual of Swift and of Swift Standard Library
- It is forbidden to use other libraries, packages, pods, etc. before Day 07
- 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 !!!

⚠ The videos on Intra were produced before Swift 3. Remove the prefix "NS" which you see in front of the class/struct/function in the code in the videos in order to use them in Swift 3.

Intra indicates the date and the hour of closing for your repositories. This date and hour also corresponds to the beginning of the peer-evaluation period for the corresponding piscine day. This peer-evaluation period lasts exactly 24h. After 24h passed, your missing peer grades will be completed with 0.

Chapter III

Introduction

You probably know that already but developpers are righty often and for most pointed as lazy: we will not reinvent the wheel every day if it already rolls perfectly. Today we will talk about pods thanks to Cocoapods !

But what is a pod exactly? A pos is not neither Planet of Death nor The Breeders. A pod is a **package** and is therefore managed by a **package manager**, **Cocoapods** in this case.

During the day we will learn how to use pods. Meaning how to install and use them. Today's objective will be to create a robot more commonly called **bot** which will give the weather forecast for a provided city.

We will use 2 distinct APIs coming from 2 services on which you will have to create an account.

- Recast.AI: An API bringing a une API **Artificial Intelligence** brick for you bot.
- Dark Sky: An open API that will allow you to get the forecast weather for a give latitude and longitude. (Formerly Forecast.IO)

Find below documentation you will need to finish the day:

- Cocoapods documentation
- Recast.AI Pod
- Dark Sky Pod
- JSQMessagesViewController Pod which will allow you to display your conversation in a messaging app way.

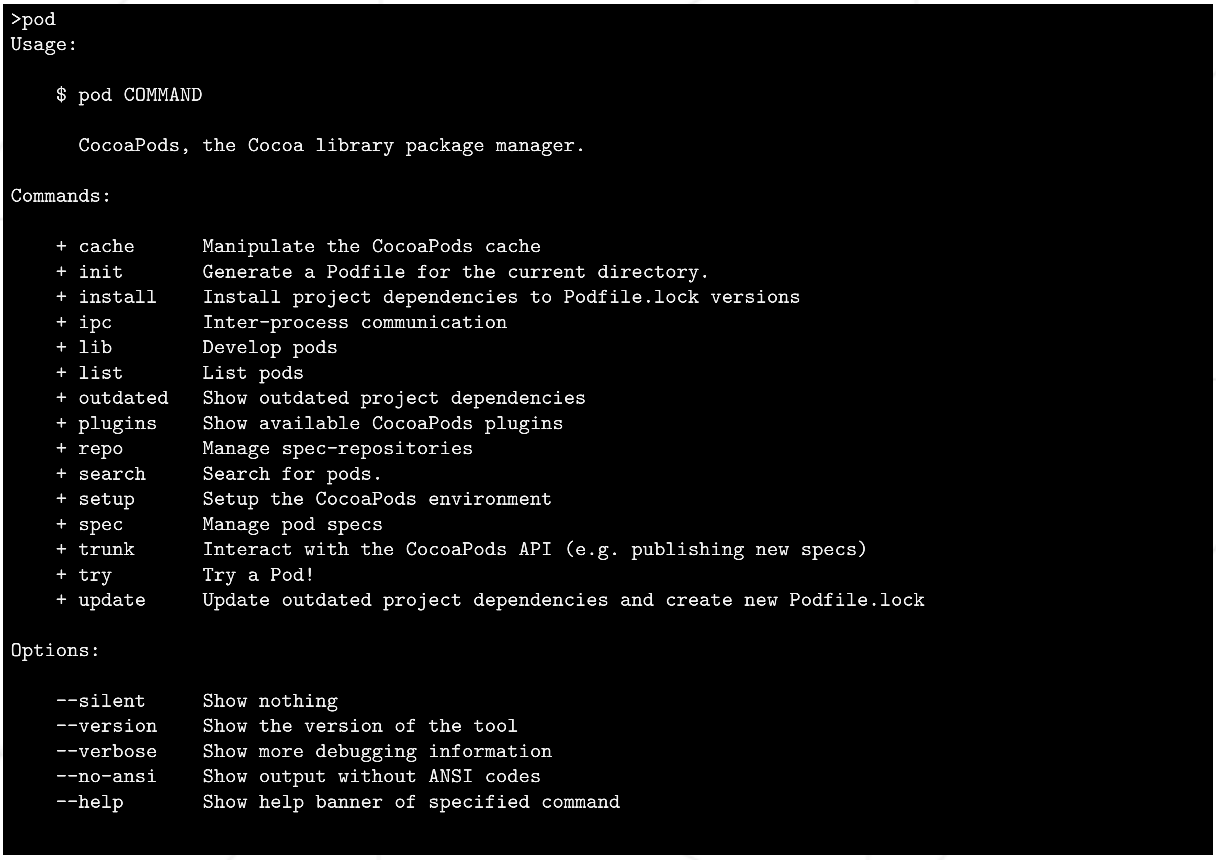
Chapter IV

Exercice 00 : Cocoapods Installation

	Exercice : 00
Cocoapods Installation	
Files to turn in : `.xcodeproj and all the necessary files`	
Allowed functions : `Swift Standard Library, UIKit, Cocoapods`	
Notes : `n/a`	

To begin with you need to install **Cocoapods**.

Go take a look at the Cocoapods website and follow the procedure. Make sure that Cocoapods is properly installed by typing **‘pod‘** in the console:



```
>pod
Usage:

    $ pod COMMAND

      CocoaPods, the Cocoa library package manager.

Commands:

    + cache      Manipulate the CocoaPods cache
    + init       Generate a Podfile for the current directory.
    + install    Install project dependencies to Podfile.lock versions
    + ipc        Inter-process communication
    + lib        Develop pods
    + list       List pods
    + outdated   Show outdated project dependencies
    + plugins    Show available CocoaPods plugins
    + repo       Manage spec-repositories
    + search     Search for pods.
    + setup      Setup the CocoaPods environment
    + spec       Manage pod specs
    + trunk      Interact with the CocoaPods API (e.g. publishing new specs)
    + try        Try a Pod!
    + update     Update outdated project dependencies and create new Podfile.lock

Options:

    --silent     Show nothing
    --version    Show the version of the tool
    --verbose    Show more debugging information
    --no-ansi    Show output without ANSI codes
    --help       Show help banner of specified command
```

Chapter V

Exercice 01 : FirstViewController

	Exercice : 01
FirstViewController	
Files to turn in : `.xcodeproj and all the necessary files`	
Allowed functions : `Swift Standard Library, UIKit, Cocoapods`	
Notes : `n/a`	

For this day you will need a controller allowing you to request `Recast` & `Dark Sky`.

Create a controller containing:

- A **Bouton** to request Recast
- A **TextField** to write the text you will send
- A **Label** to display the answer

`Think about the` **`Autolayout`**`!`

Chapter VI

Exercice 02 : “RecastAI” pod

	Exercice : 02
“RecastAI” pod	
Files to turn in : `.xcodeproj and all the necessary files`	
Allowed functions : `Swift Standard Library, UIKit, Cocoapods`	
Notes : `n/a`	

Its now time to create an account on Recast.AI. Install the ’`RecastAI`’ pod to be able

to request and use the community Slackbot bot with the weather intention and the token. Make a request via the button by passing the **TextField** as a parameter.

The **label** must display the **Recast** return intention or “Error” if no intention is returned.

Chapter VII

Exercice 03 : “Dark Sky” pod

	Exercice : 03
“Dark Sky” pod	
Files to turn in : `.xcodeproj and all the necessary files`	
Allowed functions : `Swift Standard Library, UIKit, Cocoapods`	
Notes : `n/a`	

Now you will have to display the weather forecast depending on the geolocalisation returned. You will need to create an account on Dark Sky and obtain a token for this. Intall the **’Dark Sky’** pod then make a request to Dark Sky once the **Recast** request is done. The label must display the weather forecast returned by the Dark Sky API depending on the geolocalisation returned by the **Recast** API..

Chapter VIII

Exercice 04 : “JSQMessagesViewController” pod

	Exercice : 04
“JSQMessagesViewController” pod	
Files to turn in : `.xcodeproj and all the necessary files`	
Allowed functions : `Swift Standard Library, UIKit, Cocoapods`	
Notes : `n/a`	

Since everything is done you can now polish your interface. Let’s use the **’JSQMessagesViewController’** to display the requests in a the form of a conversation with the bot.

You will have to add a button to be able to make voice requests.