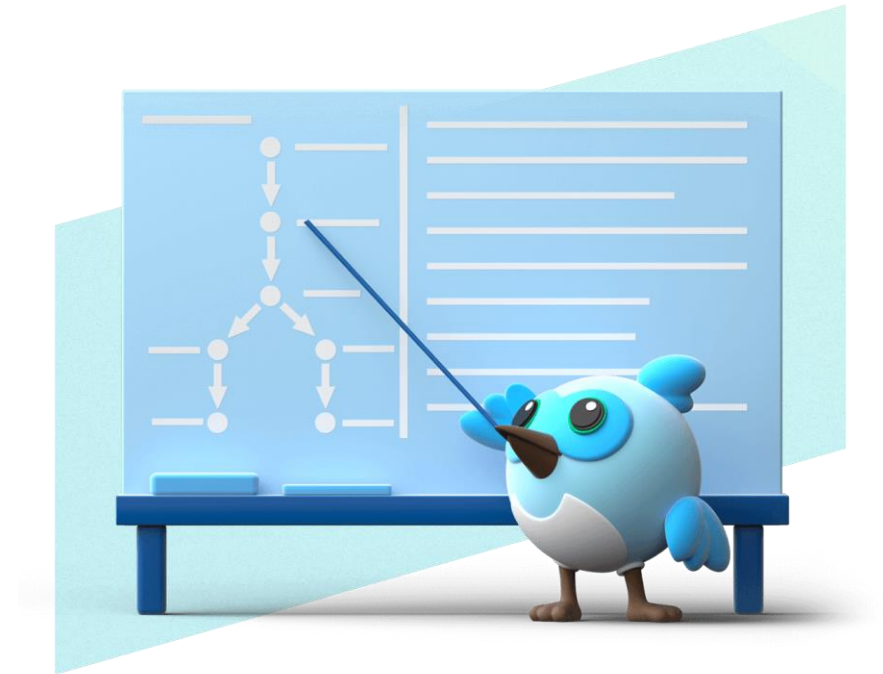


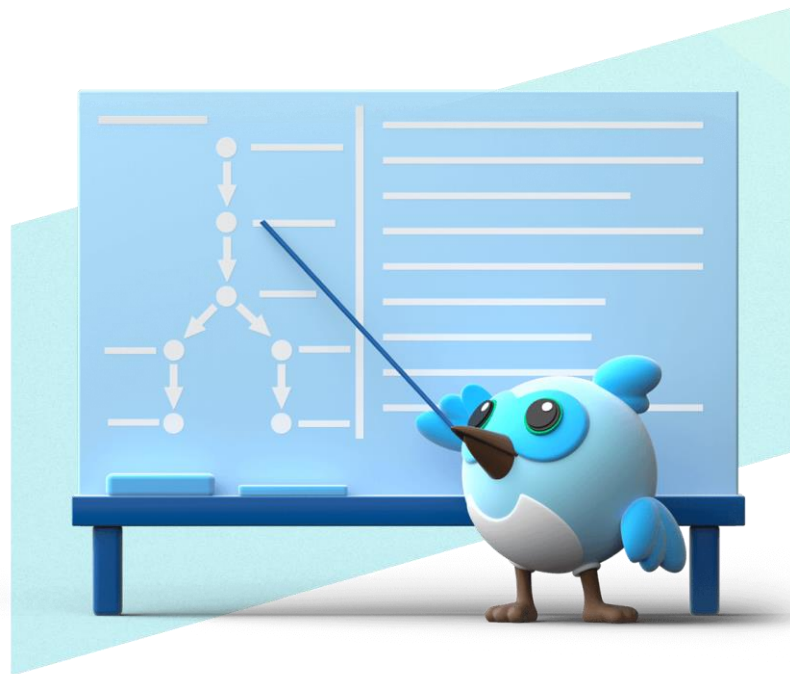
ARE YOU READY?



SPARKLE
PARTY

WELCOME!

W1-S1 – COURSE KICK-OFF



CADT
IDT



RONAN OGOR
CADT Lecturer Researcher



KICK OFF OBJECTIVES



Hello everyone !

- Let's present **myself** a bit...

Flutter Overview

- Flutter : a **cross-platform dev** framework...

Course Overview

- Course **agenda**
- Course **learning objectives**
- Your expected **work** and **attitude**
- Course **evaluation (XPs)**
- Course tools : MSTeam, VS Code, GitHub

Suggested Resources

- *MOOCS, websites, books...*

Group Reflection

For next session !

- ✓ Connect to **MS Team**
- ✓ **Individual survey** to complete
- ✓ **Self learning** (Dart) assignment







Virtual Company Jury

SEP 29th

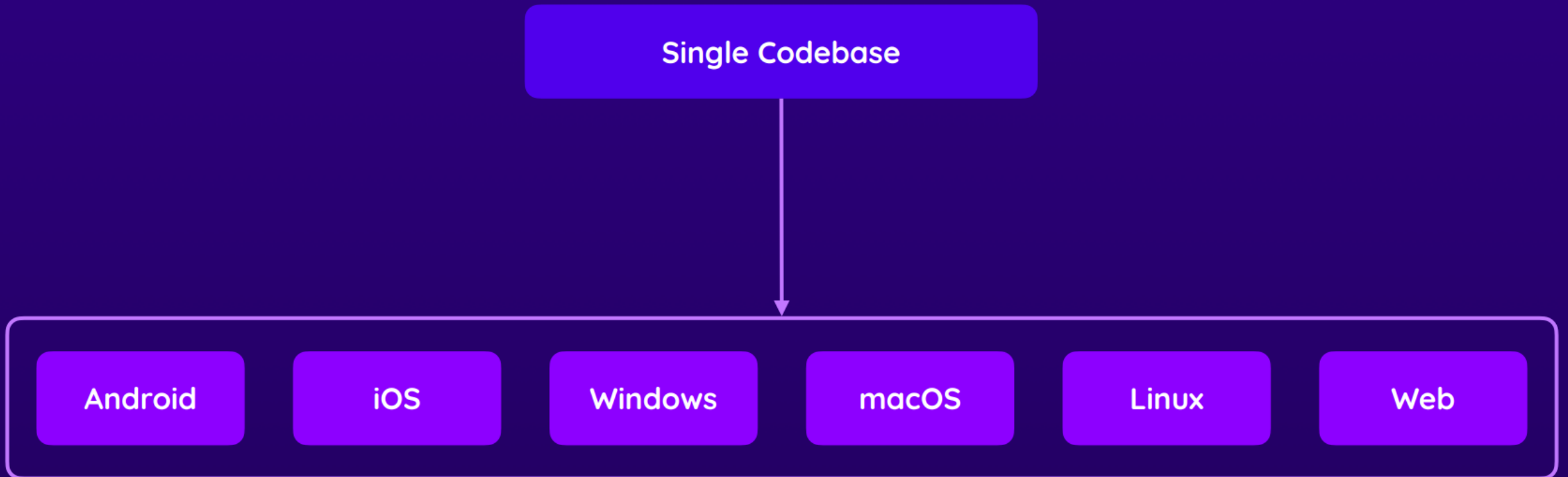
PROUDLY PRESENTED BY PNC STUDENTS OF GENERATION 2022



Introducing Flutter



Flutter : a **cross-platform** development framework



Traditional development

01

Pick a platform

02

Build your app

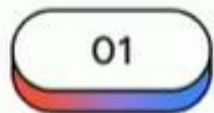
03

Pick another
platform

04

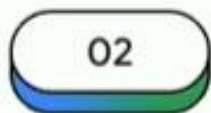
Build your app

With Flutter



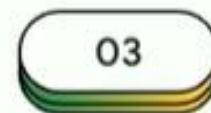
01

Build your app



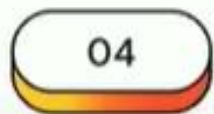
02

Pick a platform



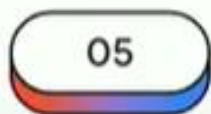
03

Pick another
platform



04

And another

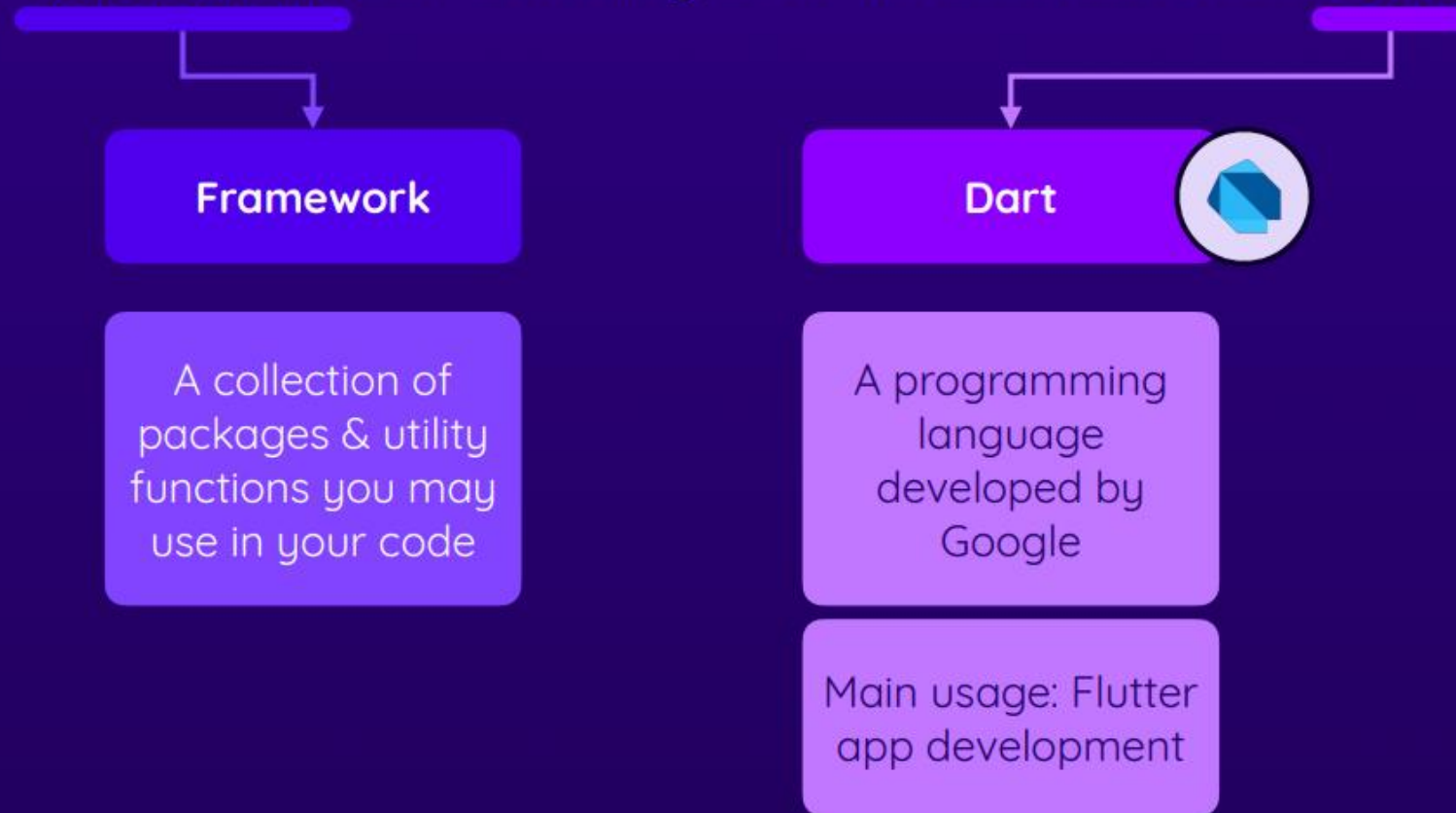


05

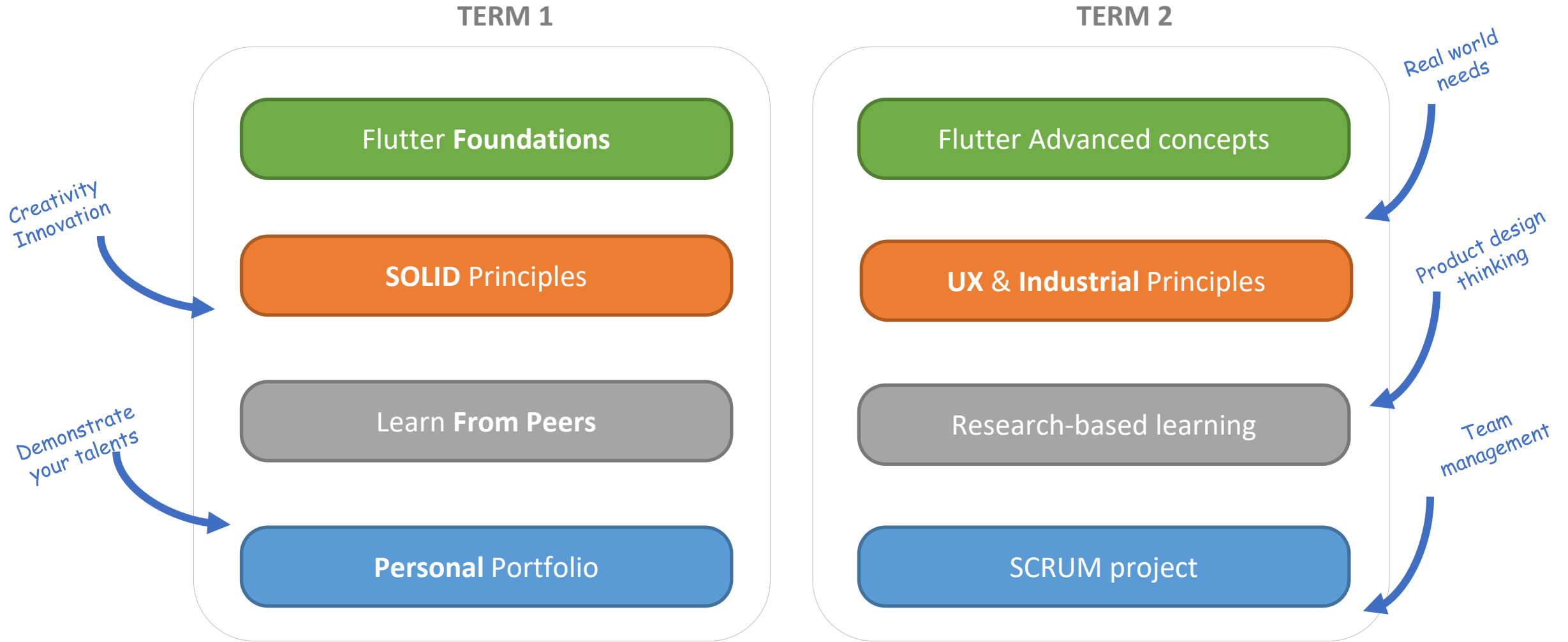
And another

Flutter is **not** a programming language!

It's a **framework** for building user interfaces with **Dart**



TERM 1 & 2 – A BIG JOURNEY !



TERM 1

FOUNDATIONS



CAMBODIA ACADEMY OF DIGITAL TECHNOLOGY
INSTITUTE OF DIGITAL TECHNOLOGY
School of Computer Sciences

MOBILE DEVELOPMENT 1 - FOUNDATIONS

Course Syllabus

Course Title	Mobile Development Foundations
Department	IDT Computer Sciences
Credit	3
In-class hours	45 hours (30 sessions)
Outside-class hours	60 hours (recommended for assignments, projects, and self-study)
Period	Year 3 –Term 1
Revision	September 2024 - Generation 09
Author	R. Ogor

Instructors		PRACTICE	
GROUP	THEORY		
G1	R. OGOR	R. OGOR	R. OGOR
G2		R. OGOR	R. OGOR
G3		R. OGOR	R. OGOR

Read the
syllabus!

TERM 1 - OBJECTIVES



KNOW

- ✓ **Dart** Demonstrate the foundational concepts of Dart, including **OOP principles**
- ✓ **Flutter** Explain how Flutter updates the UI based on the app's current state
- ✓ **Widgets** Identify Flutter widgets to handle lists, inputs, layouts, modals, conditional display etc.
- ✓ **States** Demonstrate the principles of **Stateless and Stateful** widgets in Flutter



SKILLS

- ✓ **Flutter Widgets** Manipulate the basic widgets effectively.
- ✓ **Custom Widgets** Implement **custom reusable widgets** to enhance modularity and maintainability
- ✓ **Debug** Adopt a proper **investigation methodology** and tools to troubleshoot app issues
- ✓ **Create** Develop a personal app to **demonstrate your competence achievements**



BEHAVIOR

- ✓ **Creative mindset** Propose **innovative and creative** solutions, **beyond** course assignments
- ✓ **Collaborate** Engage actively in **collaborative work** and receive **peer feedback positively**
- ✓ **Share** **Share ideas** and solutions on channels to actively contribute to our community

TERM 1 - AGENDA

45 hours (30 sessions – 3 sessions per week)

CHECK SYLLABUS

W 1	Dart
W 2	Flutter basic widgets
W 3	Stateless Widgets
W 4	Stateful Widgets
W 5	Layouting, Inputs, Lists
W 6	Quiz App
W 7	Manage Lists and Modals
W 8	Inputs Validation
W 9	Routing
W 10	Revisions, quiz, presentation
W 11	Project Jury



Project **proposal**

Project *Follow Up*

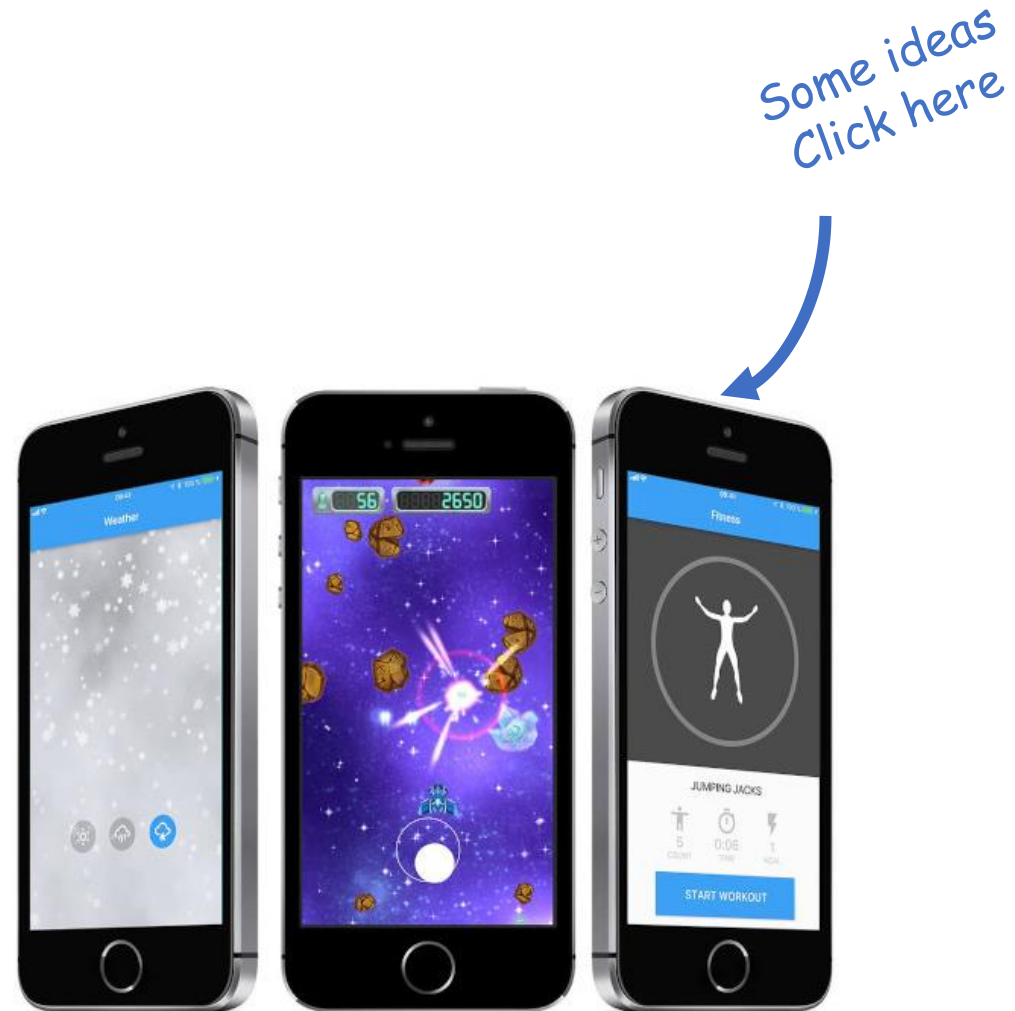
Project **Jury**



*Seminar
Company visits*

TERM 1 – PROJECT

*As part of this course, you will undertake an **individual project***



TERM 1 – PROJECT

As part of this course, you will undertake an **individual project**

RULE 1

The app shall **showcase your achievement** on course **learning objectives**

RULE 2

The app must be **original** and **useful** (*)

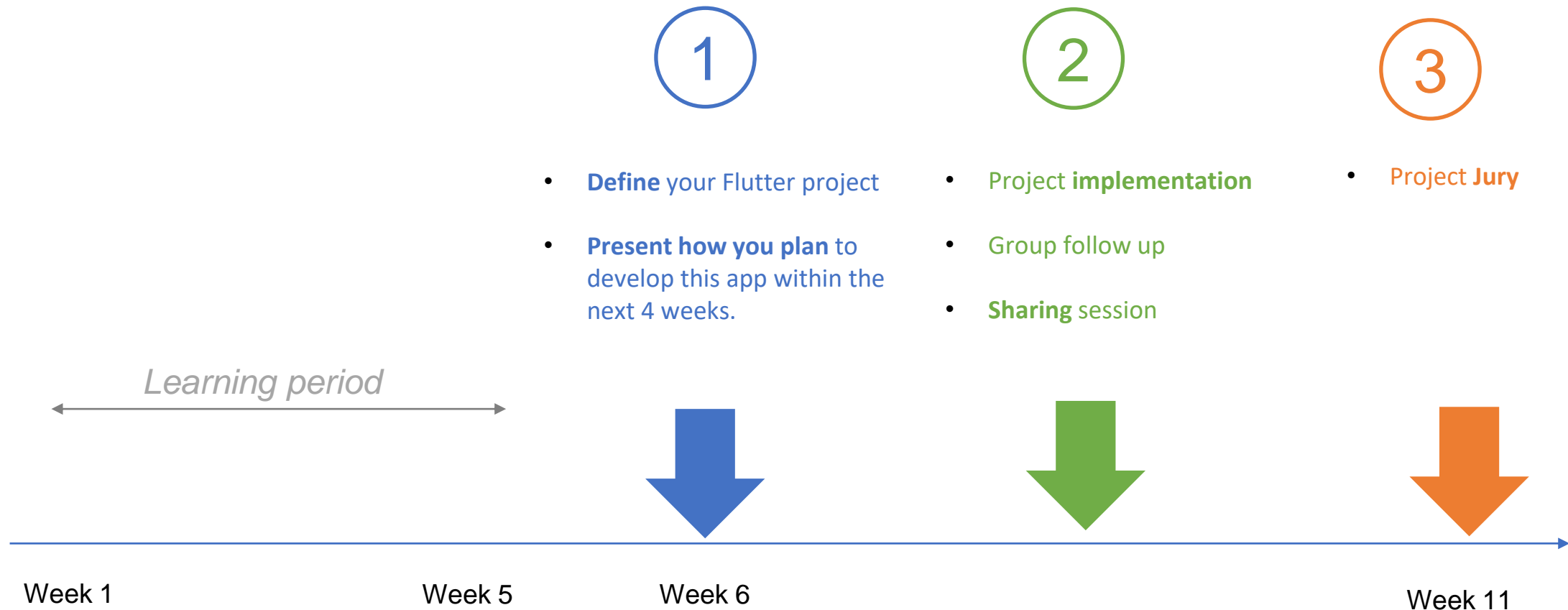
RULE 3

The app shall be **offline** only

(*) The complete requirements will be provided on week 6

TERM 1 – PROJECT

As part of this course, you will undertake an **individual project**



TERM 1 - PROJECT

We want both : **individual performance** + **peer support**.



TERM 1 - EVALUATION

CORE XP	XP
Practice submissions	200 PTS
Practice submissions defense <i>(1 defense per student per term at least)</i>	100 PTS
Weekly Quiz	100 PTS
Practice peer reviews	50 PTS
Class participation	50 PTS
Port Folio	500 PTS

BOOST XP	XP
Involvement in MS team channels	100 PTS
Group Work support	100 PTS
Special praises.... <i>Mentor</i> <i>Problem Solver</i> <i>Innovation Guru</i> <i>Presentation Pro</i> <i>OpenMic volunteer</i> ...	100 PTS

1000 PTS

TERM 1 - EVALUATION

A group of young women are seated in a classroom, looking towards the front. The woman in the foreground is resting her chin on her hand, looking intently. Other students in the background are also looking forward, some holding pens or notebooks. The scene is brightly lit, likely from a window on the right.

It s very easy to be **passive** and sit back.

A man with short dark hair and glasses, wearing a green and white plaid shirt and a dark apron, is focused on working on a sculpture. He is using a hammer and a chisel to shape a piece of material. The sculpture is mounted on a wooden block. In the background, there are other sculptures, including a large one on the right and a smaller one on the left. The setting appears to be a workshop or studio with large windows in the background.

The real learning happens when you **try by your own...**

...That s where you **challenge** your own skills set , and where you **really learn**



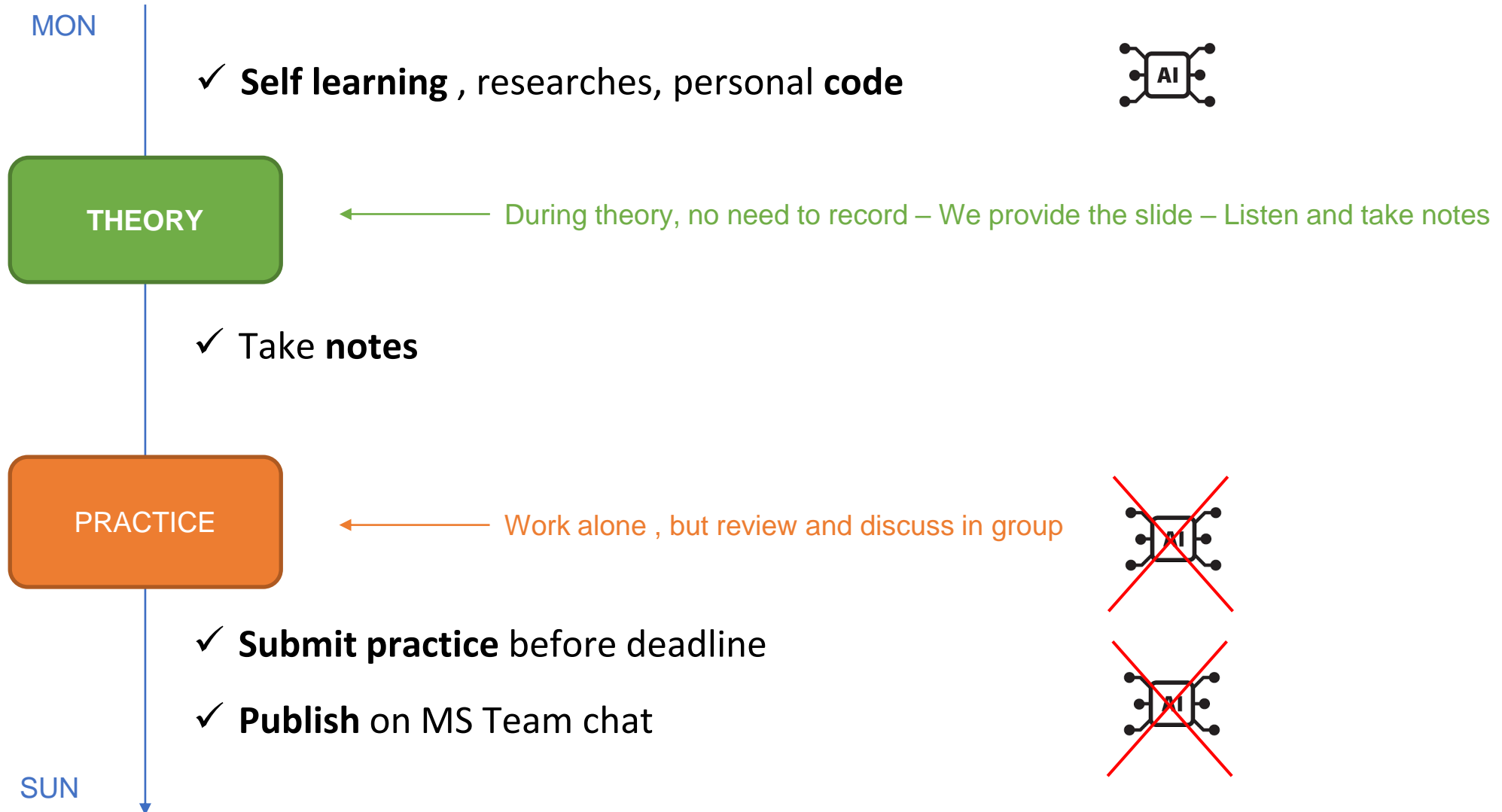
You need to first **believe you can do it**



Everyone is different, but **it s your difference that makes the difference**

HOW MUCH **WORK** PER WEEK ?

*We expect **6 hours at least** per week of personal work*




MANAGE YOUR TIME

*Plan your learning using a calendar ! Look at bellow **example** :*



You can use
MS team calendar
To see the **deadlines** !

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
8 AM							
9 AM							
10 AM	LEARNING			Finalize practice 1	Finalize practice 2		Self Learning
11 AM							
12 PM							Send a post
1 PM							
2 PM			PRACTICE				
3 PM							
4 PM	Update my notes	Personal Coding					 Submit assessments before Sun 11 PM
5 PM							

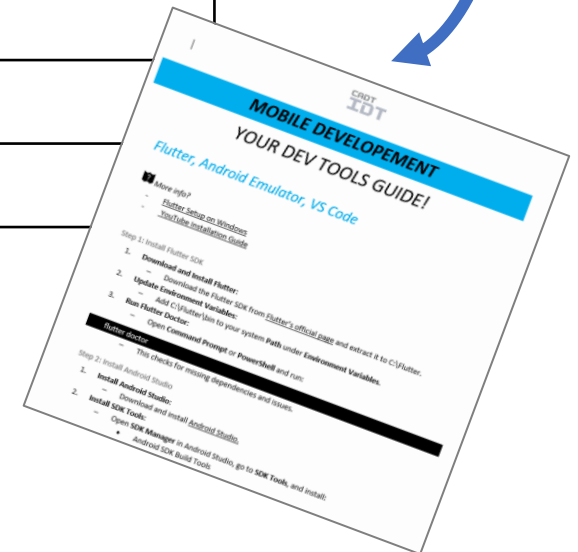
COURSE SOFTWARE

You will need to install the following software/application

SFTWARE	REASON
Flutter SDK (*)	The core framework for developing Flutter apps
VS Code	IDE with Flutter and Dart extensions
MS Teams	Our main tool to communicate on this course
Android Studio	To run emulator for Android
Git	Version control system to submit code
Figma	For designing and prototyping UI/UX

(*) includes Dart SDK

Read the guide!



MS Team For Education

How to use MS Team for this course ?

[CLICK HERE FOR
FULL GUIDE](#)





MS Team – User Interface

[CLICK HERE FOR FULL GUIDE](#)

General information about the course

The Classwork is the place to structure the learning experience

Check your grades, your reflections

Communicate with your peers !

The screenshot shows the MS Team interface for a team named 'CADT'. The left sidebar contains a navigation menu with the following items: 'Home page', 'Class Notebook', 'Classwork' (highlighted), 'Assignments', 'Grades', and 'Reflect'. Below this menu is a section for 'Main Channels' with a 'General' channel. The main content area is titled 'Classwork' and displays a list of items: 'W0 - Course information' (with 3 files), 'W1 - HTML' (with the description 'Learn about HTML basic elements'), 'Before S1-THEORY', 'S1 - LEARNING - Anatomy of HTML elements - FOR STUDENT', 'S2 - PRACTICE', 'PYTHON ASSIGNMENT' (marked 'Due Today'), 'S3 - PRACTICE - EVALUATED', and 'S4 - GROUP WORK' (submitted at 2:59 PM).



A Week Work in MS Team

From zero to Hero !

**CLICK HERE FOR
FULL GUIDE**

**After the theory class, you have to review the concepts
And train yourself with some activities !!**

**Before the theory class, this time !!
you have to watch some video to be ready enough**

Research task !
You have to prepare a research and present it later on

Practice !
You will have to provide us your GitHub path or a ZIP file
with your code


Quiz !
Evaluate your skills ! Time to see what you need to
progress on


▼ W3 - CSS BASICS


CSS Concepts


- Use CSS using either inline, internal or external syntax
- Use the following 4 CSS selectors to target elements: type, id, class, grouping
- Understand the concept of cascading (Inheritance)

[See more](#)


 S1 - LEARNING - CSS Concepts - For students


 S1 - LEARNING - CSS Concepts - TODO AFTER
Due Oct 24th


 S2 - LEARNING - CSS Box Model & Units - TODO before
Due Oct 28th

 S2 - LEARNING - CSS Box Model & Units - FOR STUDENT

Slides or
other
documents
To read

 RESEARCH ASSIGNMENT
Due Nov 10th

 S3 - PRACTICE - CSS Selectors & Box Model
Due Oct 27th


 W3 - CSS BASICS - QUIZ
Due Oct 27th


TERM 2

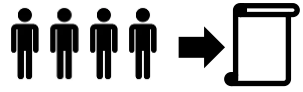
IN A NUTSHELL...

- ✓ CADT **FlutteCon'25**
- ✓ **Research project** (*in pair*)
- ✓ **Group project** - *Industrial connection, SCRUM*
- ✓ Company visits - *Industrial connection*

- ✓ Mobile UX Design
- ✓ UX Workflow
- ✓ Backend integration
- ✓ Deployment
- ✓ Screens Navigation
- ✓ Animations and Gestures
- ✓ Native Device Features
- ✓ Testing Strategies



GLOBAL CITIZEN  Flutter



15 MIN

Express your **feeling** about this course

Create a poster in team → present your poster to the whole class

Q1 - How **do you feel** after this kick off?

Q2 - What kind of **involvement, work habit** do you plan to commit?

Q3 – What are your **concerns** and your **needs**?

For next session...

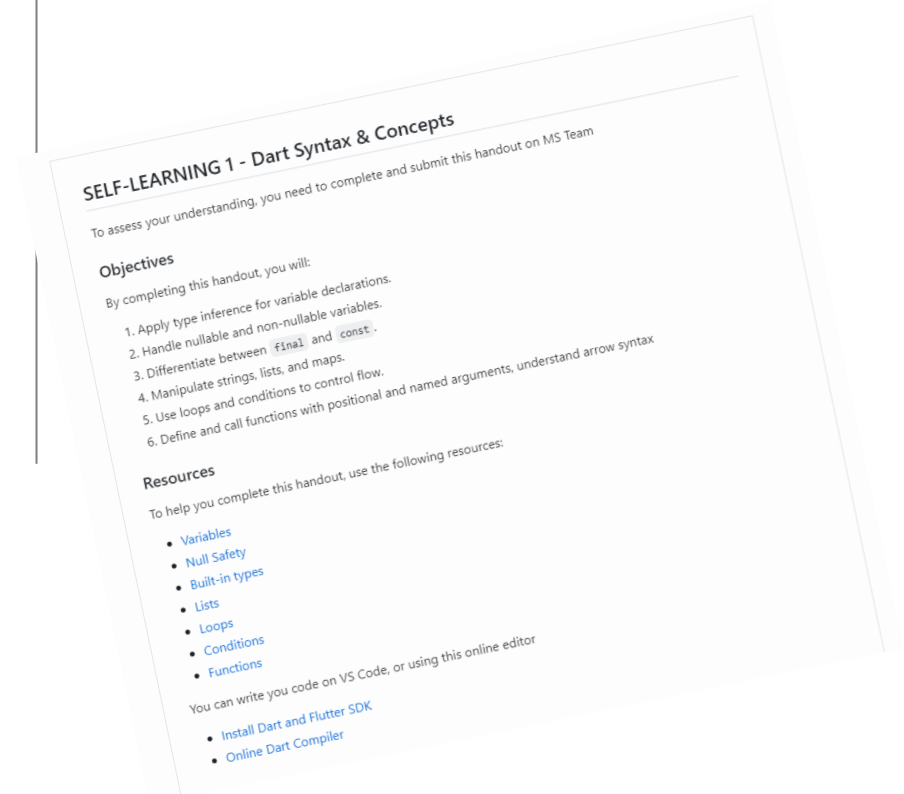
- ✓ Connect to **MS Team**



- ✓ Complete the Survey to **present yourself**



- ✓ Submit the **Self learning assignment (dart)**



RESSOURCES FOR THIS COURSE

CHECK SYLLABUS

FLUTTER DOC

Dart, Flutter, Pub Official websites

<https://dart.dev/>

<https://flutter.dev/>

<https://pub.dev/>

Flutter YouTube channel

<https://www.youtube.com/@flutterdev>



Flutter Cookbook

<https://docs.flutter.dev/cookbook>

FLUTTER CLEAN CODE GUIDE

[See this guide](#)

FLUTTER MOOCS

[Udemy - Dart & Flutter Course](#)

[ClassCentral MOOC](#)

[Udemy - Figma - UI UX](#)



IDE / TOOLS – *if needed*

Online Flutter editor

<https://zapp.run/profile>

Online Dart editor

<https://dartpad.dev/>



GOOD LUCK !!

