



Professional Skills 3

Personal Professionalization Program

David Silva Troya

Academic year 2023-2024

Campus Geel, Kleinhoefstraat 4, B3-2440 Geel

Contents

Learn Figma: User Interface Design Essentials – UI/UX Design	7
Section 1: Introduction	7
1. Introduction to the course	7
2. Introduction	7
3. Structure of the course	8
4. Required Tools	8
5. Free UI Kits	9
6. Get Your Free E-book	9
Section 2: Design Basics	10
7. Intro to Design Basics	10
8. Layout	10
9. Visual Hierarchy	10
10. Visual noise	11
11. Iconography	11
12. Typography	11
13. Color Contrast	12
14. Color Palette	12
15. Spacing	12
16. Composition	13
17. Design Guide	13
18. Consistent fonts	13
19. Consistent Colors	14
20. Consistent Icons	14
21. Consistent UI Elements	14
22. Font Resources	15
23. Color Resources	15
24. Icon Resources	15
Section 3: Figma Academy	16
25. Introduction to Figma	16
26. Figma Requirements	16
27. Figma Environment	16
28. Assets	17

29.	Shapes	17
30.	Editing Shapes	18
31.	Layers Basics.....	18
32.	Boolean Operations	19
33.	Text.....	19
34.	Text Inspector	19
35.	Text Styles	20
36.	Constraints And Adaptative Layouts.....	20
37.	Auto Layout.....	21
38.	Images	21
39.	Styling: Fill	22
40.	Styling Stroke	22
41.	Styling: Effects.....	23
42.	Color Style	23
43.	Masking.....	24
44.	Components.....	24
45.	Variants	25
46.	Layout Grids	26
47.	Plugins.....	26
48.	Exporting.....	27
49.	Prototyping	28
50.	Multiplayer & Commenting	29
51.	Keyboard Shortcuts.....	30
52.	Final Projects.....	30
Section 4: UI Elements		31
	Intro to the UI Elements.....	31
	The UI Elements in this section.....	31
Section 5: Wireframing		32
	Introduction to the Wireframing	32
	More information about Wireframe and Prototype	32
Section 6: Creating your Design System – Part 1		32
	Introduction Color Style.....	32
Section 7: Creating your Design System – Part 2		33

Introduction to typography	33
Section 8: Application Design – Finance App.....	34
Designing a Modern App.....	34
Result of the designed app	34
Section 9: Web Design – Design Your Website.....	35
Introduction to the Project	35
Result of the designed website.....	35
Section 10: Logo Design	36
Introduction	36
Result of the Logos.....	36
Section 11: Adobe Photoshop.....	37
Information about this section	37
Section 12: 3D Modeling for UI Design	37
Information about this section	37
Section 13: Prototyping	38
Information about this section	38
Section 14: Portfolio	38
Information about this section	38
Section 15: Business Ideas	39
Information about this section	39
Section 16: Inspiration & Resources	39
Information about this section	39
Section 17: What do Next	40
Information about this section	40
Section 18: Bonus Lecture.....	40
Information about this section	40
Certificate from Learn Figma Course.	41
Screenshot from the Udemy website	41
Link to see the certificate:.....	41
Flutter Artificial Intelligence Course – Build 15+ AI Apps	42
Section 1: Introduction	42
Welcome to the course.....	42
Section 2: Complete Setup – Download & Install Flutter SDK	43

Flutter for Windows	43
Section 3: Cat vs Dog Detector App	43
Creating Project and Installing Dependencies	43
Adding Splash Screen	46
Creating Home Page	49
Home Page Design – Complete.....	49
Downloading Dataset and Perform Training on Dataset – Get Trained Model.....	50
Adding TFlite Functions.....	50
Creating Functions for Capturing Image and Pick Image from Gallery.....	50
Completing App and Texting the App	51
Completed Project	51
Section 4: Face Mask Detection App	53
Completed Project	53
Section 5: Cats Breed Identifier App	54
Completed Project	54
Section 6: Flower types Identifier App.....	55
Completed Project	55
Section 7: Avengers Characters Recognizer App	56
Completed Project	56
Section 8: Image Caption Generator App	57
Completed Project	57
Section 9: Live Object Detection App	58
Completed Project	58
Section 10: More Projects.....	59
Conclusion and Link of the repository:	59
Certificate from Flutter Artificial Intelligence Course – Build 15+ AI Apps.....	59
Screenshot from the Udemy website	59
Link to see the certificate:.....	59
Deep Learning Course with Flutter & Python – Build 6 AI Apps.....	60
Section 1: Introduction to the Course.....	60
Course Introduction	60
Section 2: Sign Language Detector in Teachable Machine	61
Simple NN – Building a Sign Language Detector in Teachable Machine	61

- Section 3: Cat and Dog Classifier..... 61
 - Completed Project 61
- Section 4: Flower Classifier 62
 - Completed Project 62
- Section 5: Fruit and Vegetable Classifier 63
 - Completed Project 63
- Section 6: Sentiment Analysis NLP Algorithm..... 64
 - Completed Project 64
- Section 7: Image-To-Text NLP Algorithm 65
 - Completed Project 65
- Section 8: Sketch2Real GAN App 66
 - Completed Project 66
- Section 10: Projects..... 67
 - Conclusion and Link of the repository 67
- Certificate from Deep Learning Course with Flutter & Python – Build 6 AI Apps. 67
 - Screenshot from the Udemey website 67
 - Link to see the certificate:..... 67

Learn Figma: User Interface Design Essentials – UI/UX Design

Arash is the name of the teacher for this course, he is an UI/UX designer. The course start with the Design Basics, after that all about Figma and then start the practice creating a Wireframe, Application, Website, Logo and more.

This course has **10 hours** in total.

The screenshot shows the Udemy course page for "Learn Figma: User Interface Design Essentials - UI/UX Design". The course is by Arash Ahmadi. It has a 4.4 star rating from 1,639 reviews and 5,912 students. The course is in English and was last updated on 11/2022. The page features a video preview, a list of learning objectives, and a list of included resources. The learning objectives include becoming a UI/UX designer, mastering Figma, building a web designer, and creating a UI project. The included resources include 10 hours of video, 15 articles, 14 downloadable resources, and access to mobile devices and TV. The course also includes a final certification and a coupon code.

Section 1: Introduction

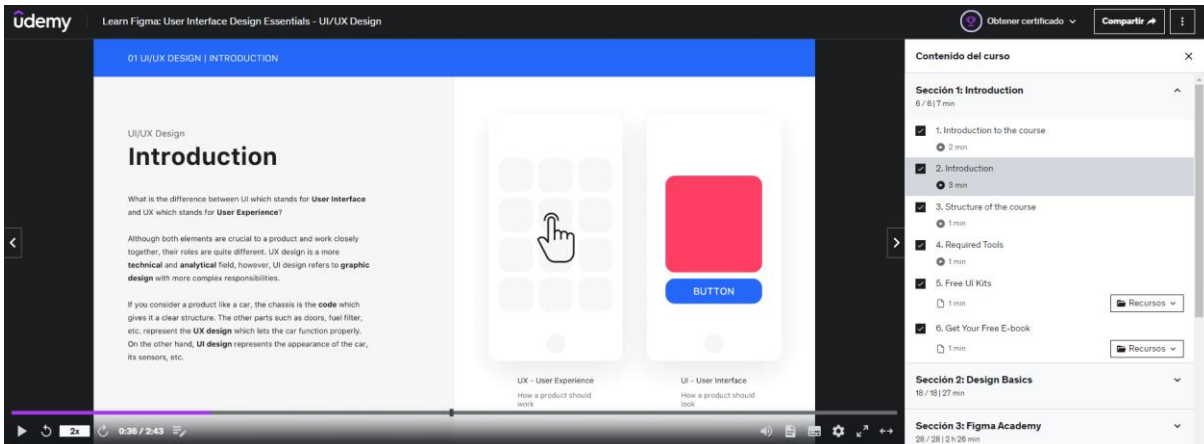
1. Introduction to the course

This video is to know better what this course is really about and all the information that will be given.

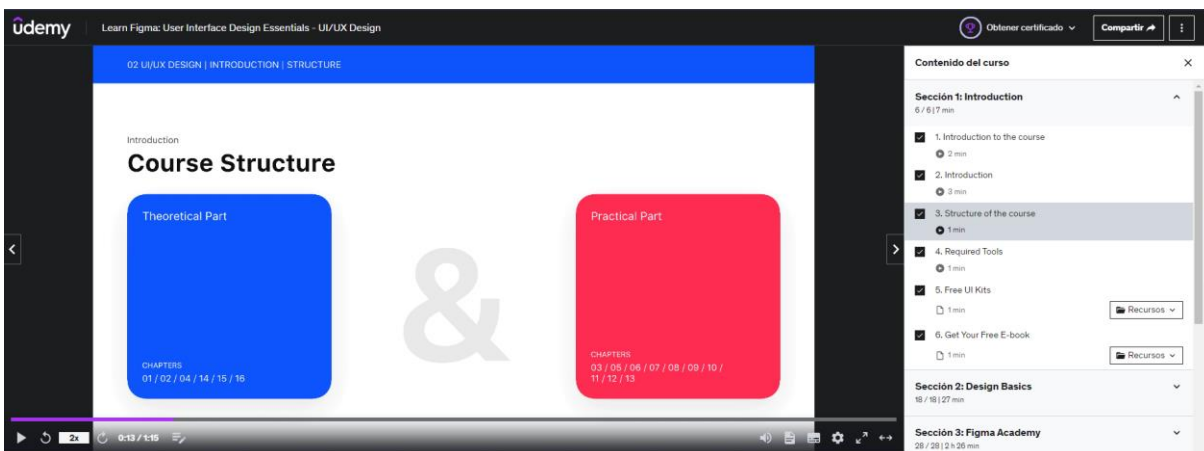
The screenshot shows the video player for the first video in the course, "Introduction to the course". The video is titled "Design Fast and powerful, just like your work" and features a yellow background with a green wireframe diagram and a blue text box containing "Rag 123". The video player includes a progress bar, a volume control, and a list of course content on the right side. The course content list includes: 1. Introduction to the course (2 min), 2. Introduction (3 min), 3. Structure of the course (1 min), 4. Required Tools (1 min), 5. Free UI Kits (1 min), 6. Get Your Free E-book (1 min), Sección 2: Design Basics (18 / 18) 27 min, Sección 3: Figma Academy (28 / 28) 12 / 26 min, and Sección 4: UI Elements (16 / 16) 18 min.

2. Introduction

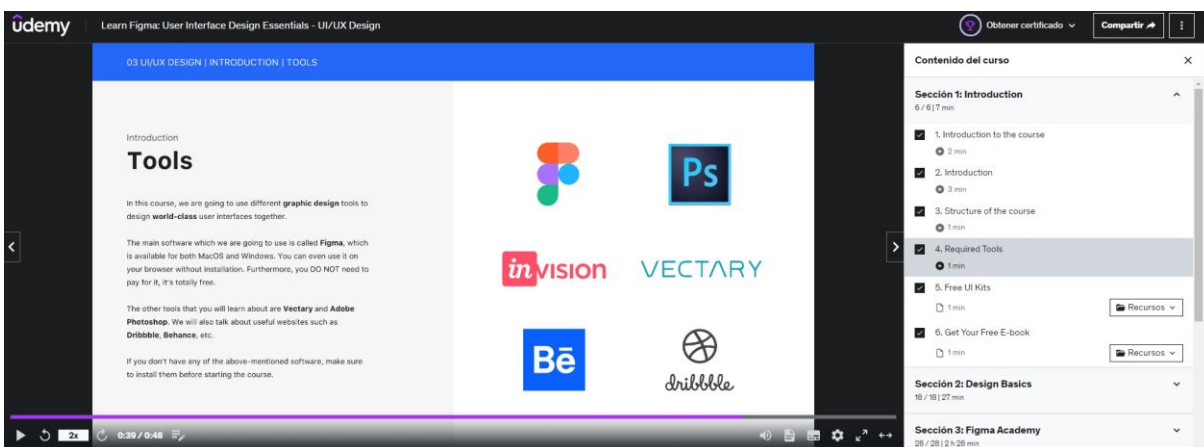
This video is to understand the structure of the course, understand the difference between UX and UI. Also understand what the responsibilities of each part are, being UX the behavior to have a good experience using the interface and the UI the nice-looking part of the interface.



3. Structure of the course
Going into details of the two main parts of the course. The theoretical part and the practical part.

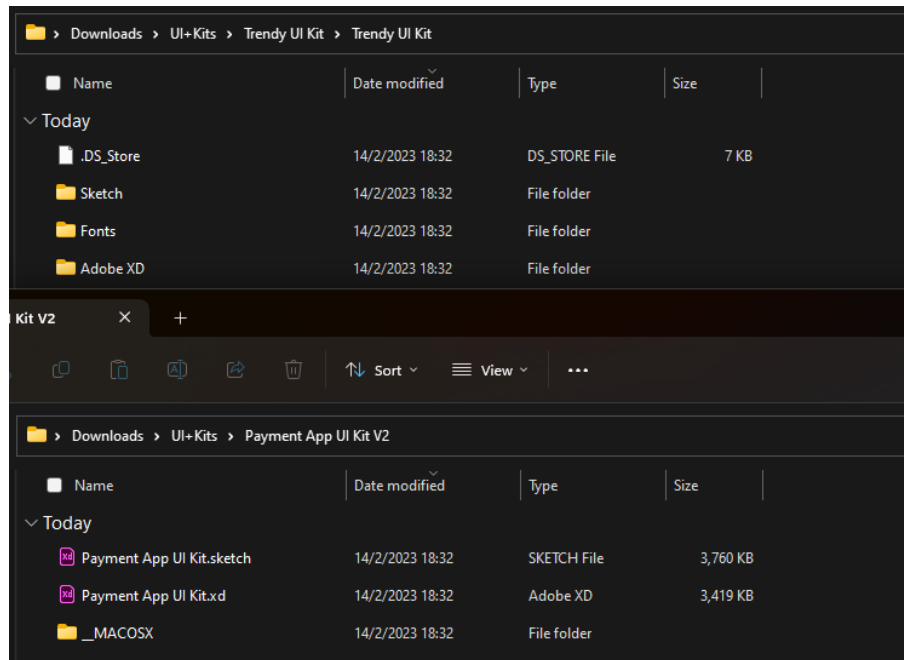


4. Required Tools
All the different design tools that will be used in this course.



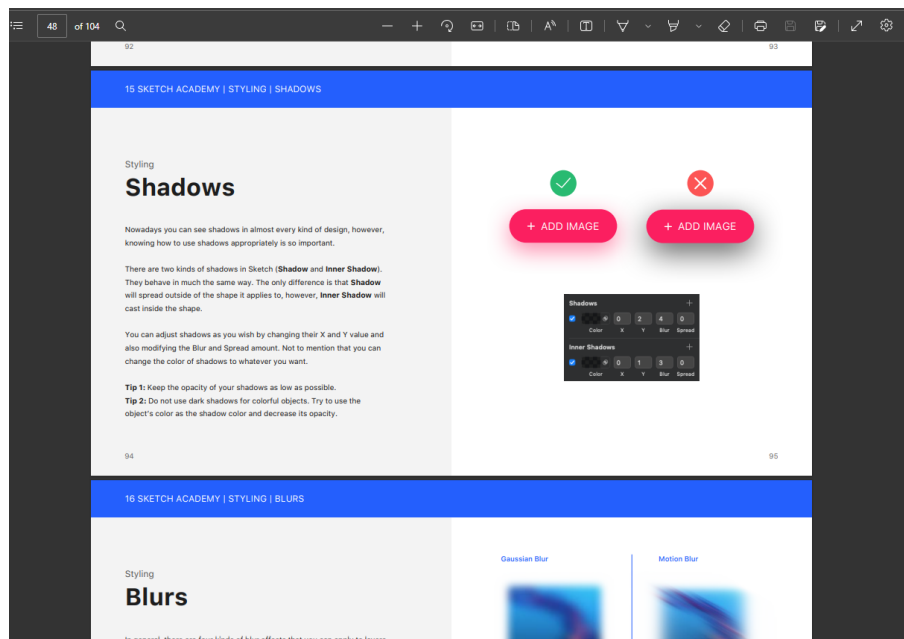
5. Free UI Kits

This part gives the link to download a zip file with files to use later.



6. Get Your Free E-book

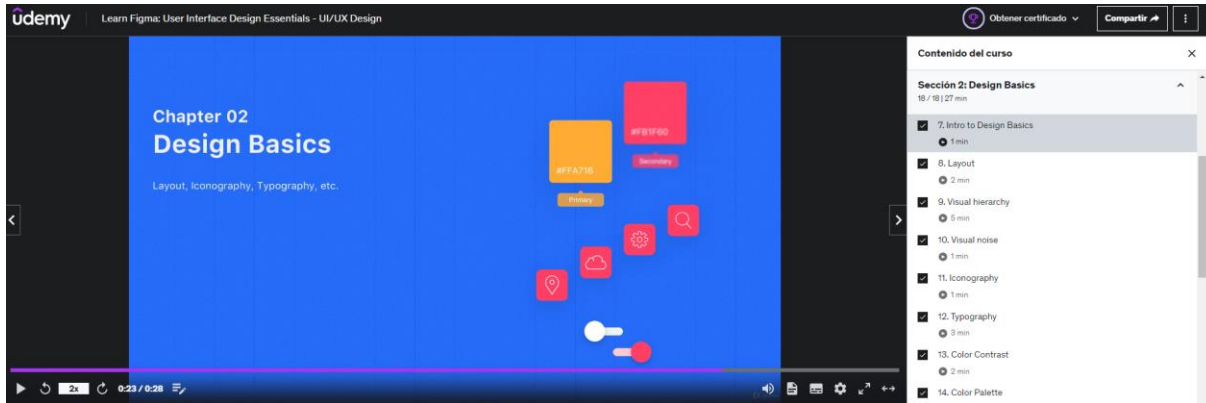
This part is to get the PDF version of the theoretical part that will be given in the next videos, this is also the best-selling book of Arash.



Section 2: Design Basics

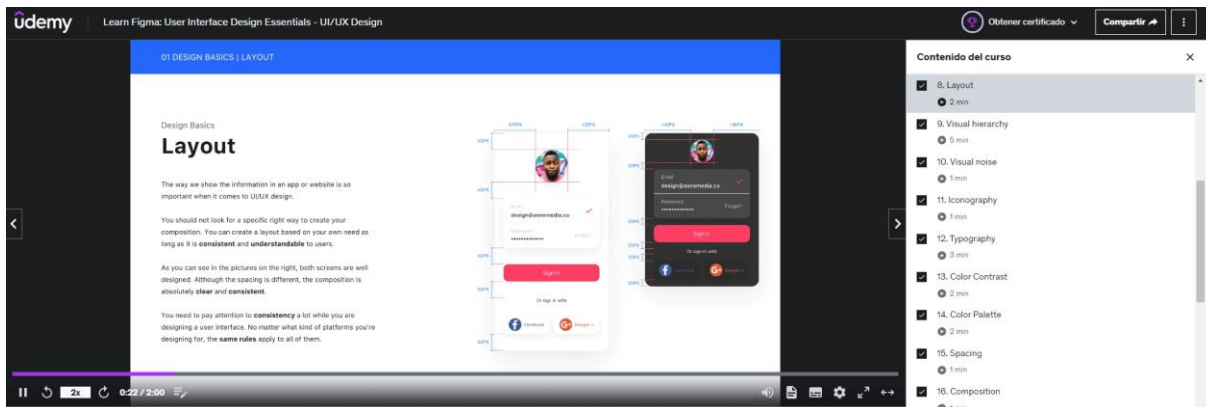
7. Intro to Design Basics

Here it is just a brief explanation of all the content that is coming.



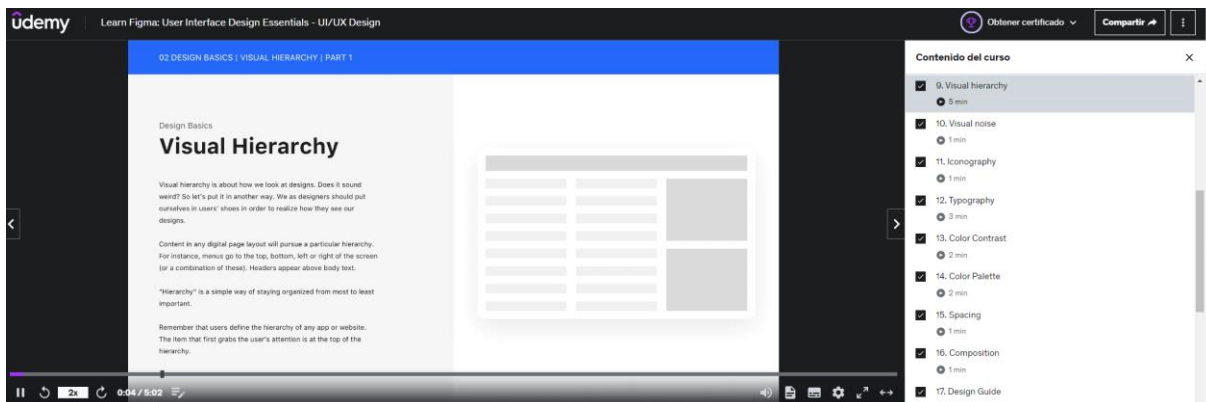
8. Layout

The importance of the way to show the information, being consistent with the information, this is the most important part since there is not a unique way to show the information.



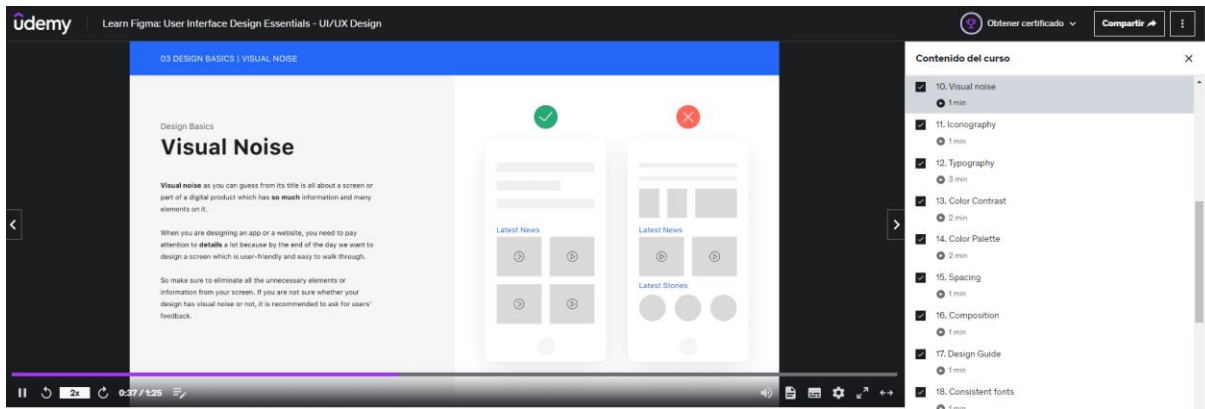
9. Visual Hierarchy

This is about how we look at designs, the importance to put ourselves in the user shoes and see what they see in order to give them the information they need and want.



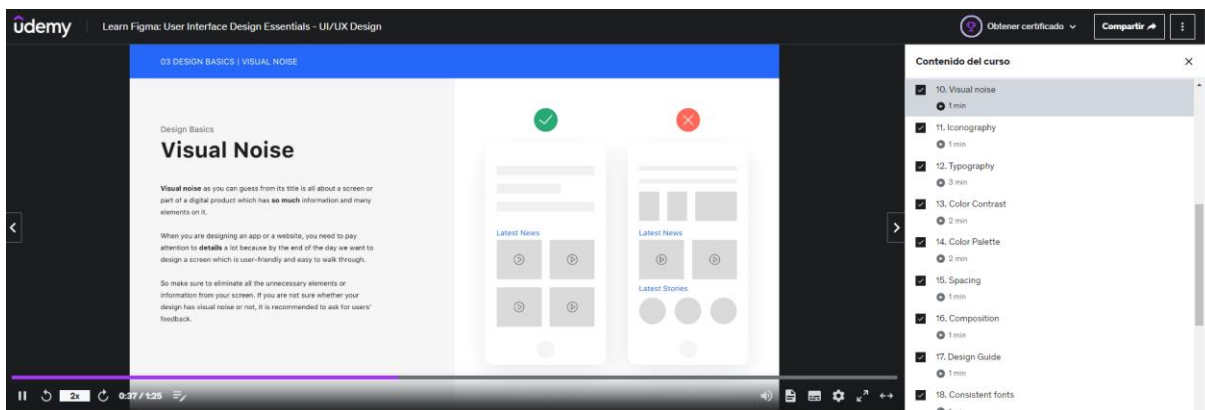
10. Visual noise

Everything that gives too much and unnecessary information to the user. It is always a good idea to ask to the user if you are not sure about it.



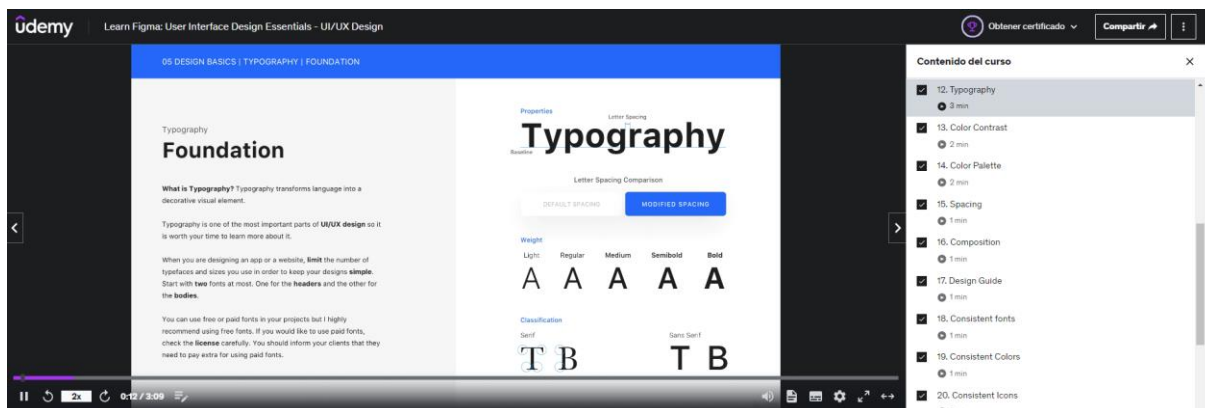
11. Iconography

It is not necessary to reinvent the wheel, a lot of icons are already design but in case it is necessary because of the unique type, then it is important to keep the harmony and consistency to be sure users can understand them.



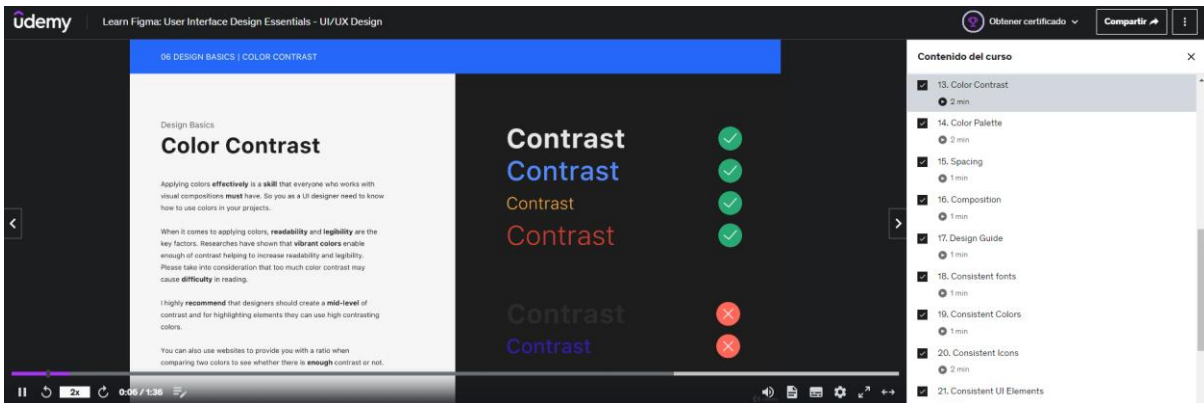
12. Typography

Avoid confuse the user by using not more than 3 types of fonts, 2 is the best.



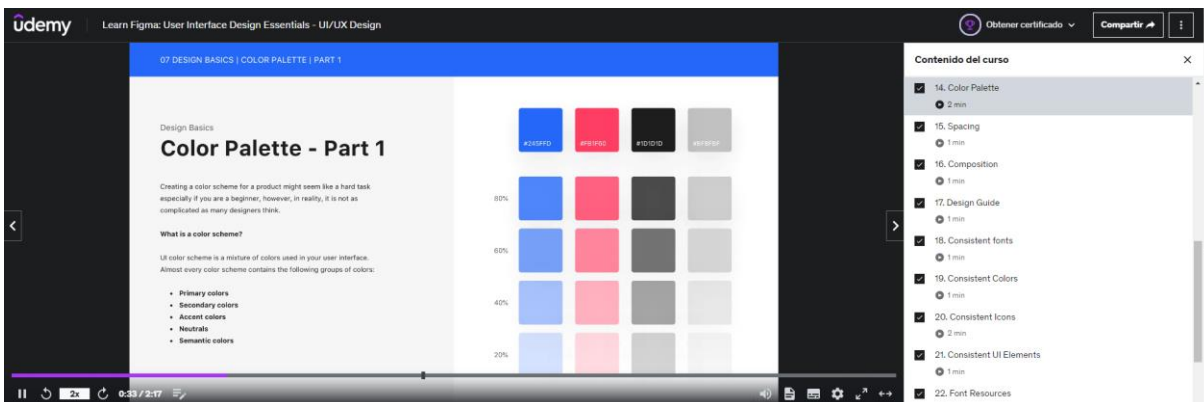
13. Color Contrast

Important for readability and legibility, do not let the creativity makes difficult to the user to understand the design.



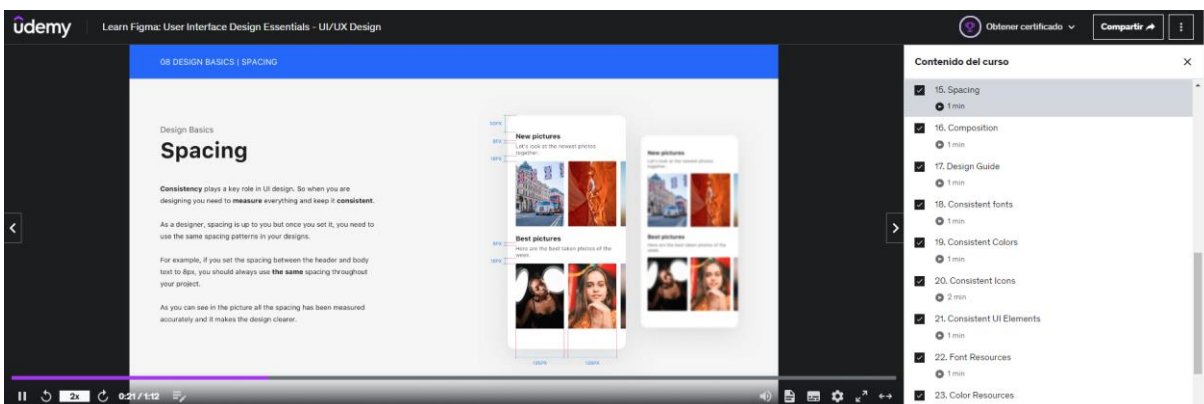
14. Color Palette

Again, not more than 3 different colors, and always important to choose them to think in the properties of the color to combine them.



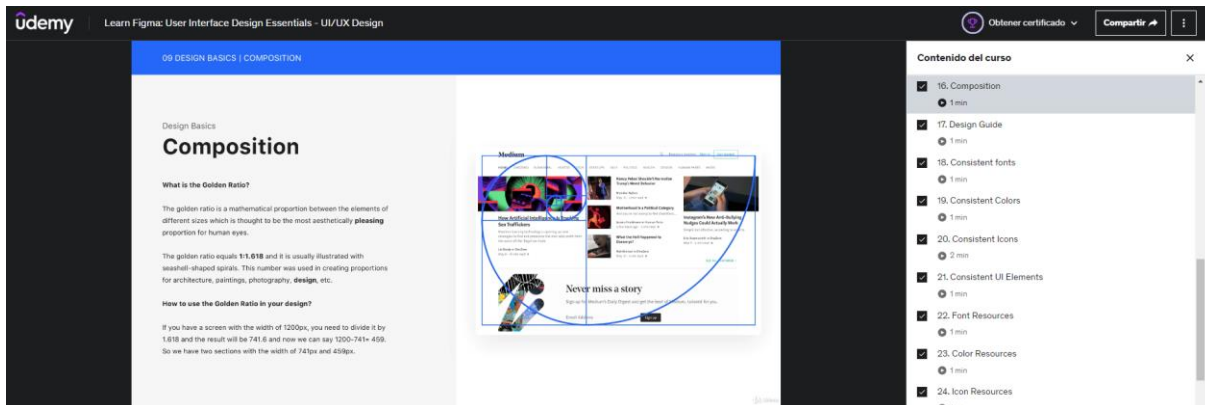
15. Spacing

Keep the design clear using consistency in the spacing patterns. This part is not always easy to see once you are designing when you are just starting.



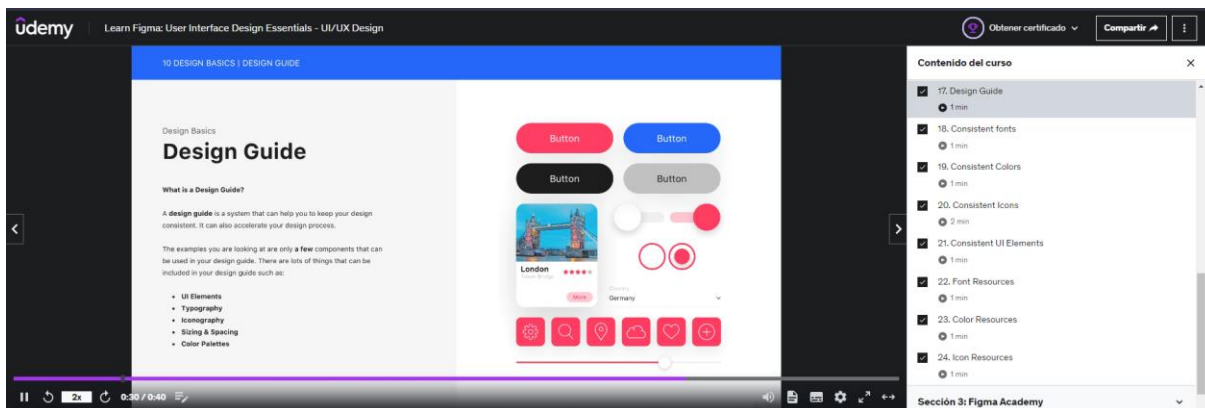
16. Composition

Using the golden ratio to direct the user attention to a specific part of the design and also setting there the most important information.



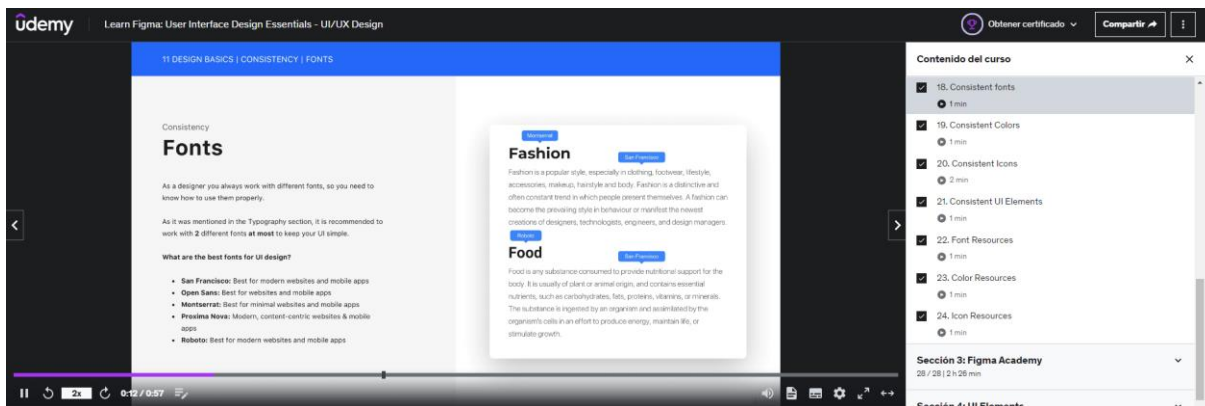
17. Design Guide

This makes design easier, having a path to follow is useful to avoid creating designs that not fits with the whole project.



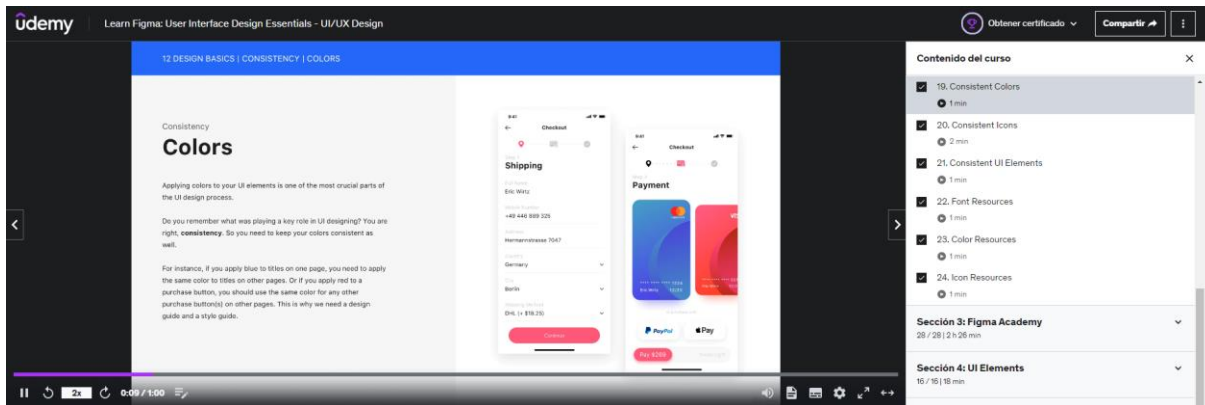
18. Consistent fonts

Here more about the importance of the type of fonts and some advice to which one use depending of the type of design.



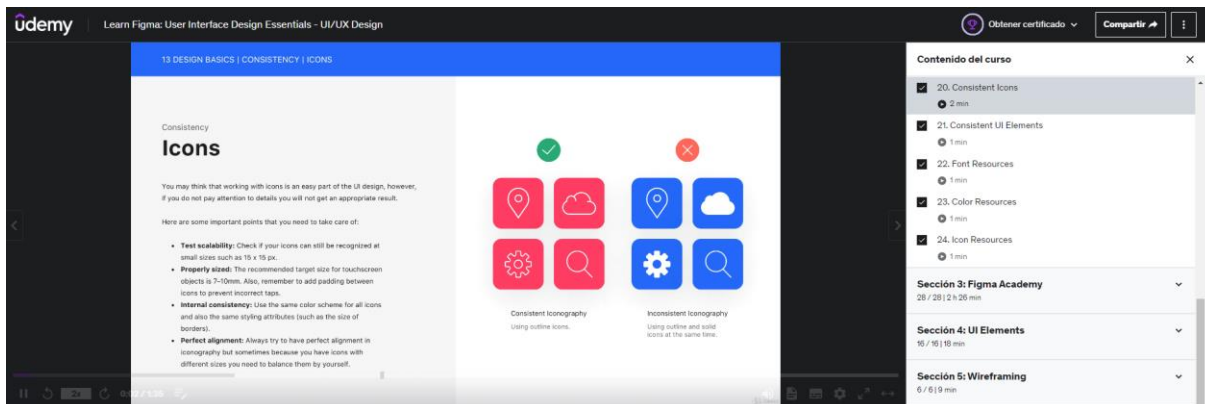
19. Consistent Colors

Color is the most important part for a good design, always keeping consistency. Using the same color for every element that has the same meaning.



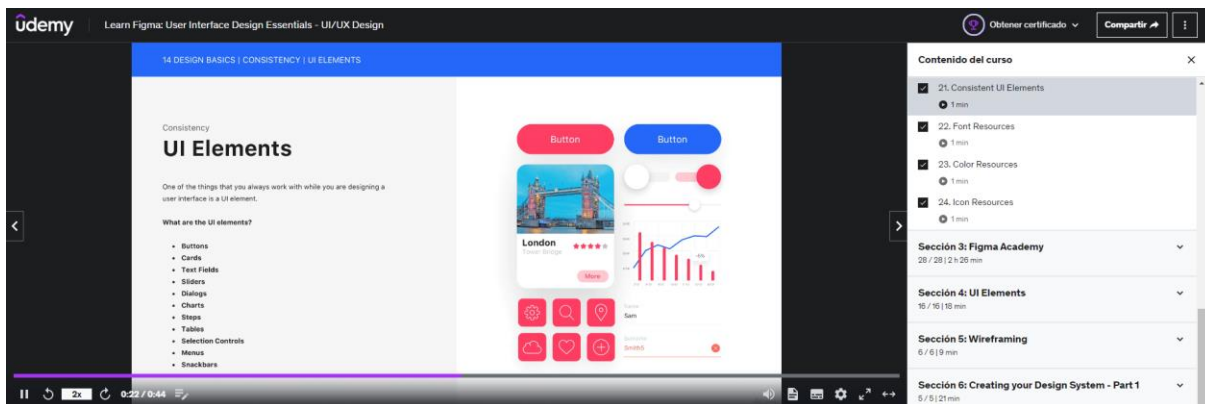
20. Consistent Icons

Important to consider the scalability, sized, consistency and alignment of your icons. They should give the same message, the same meaning, and the same feeling in every interface.



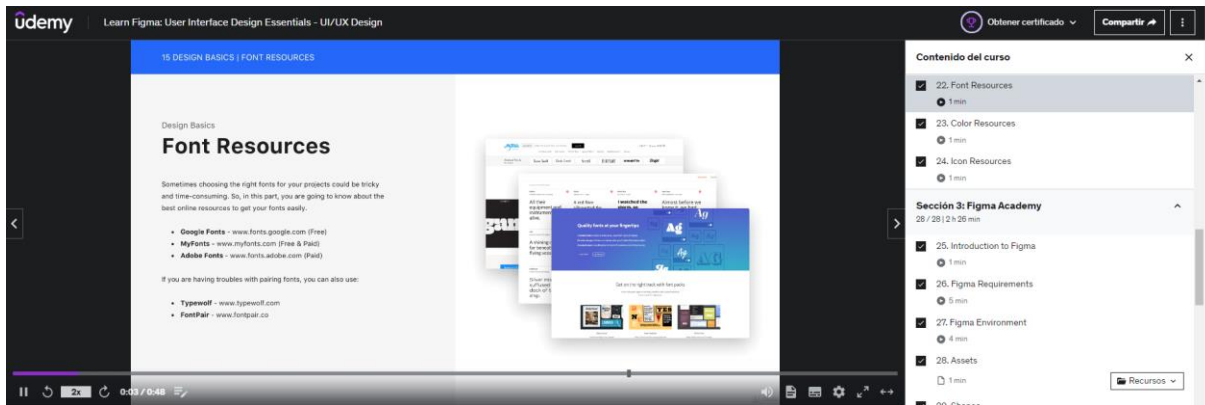
21. Consistent UI Elements

It is important to recognize all the different UI Elements in order to can search information about it or find them easily once we are working with them.



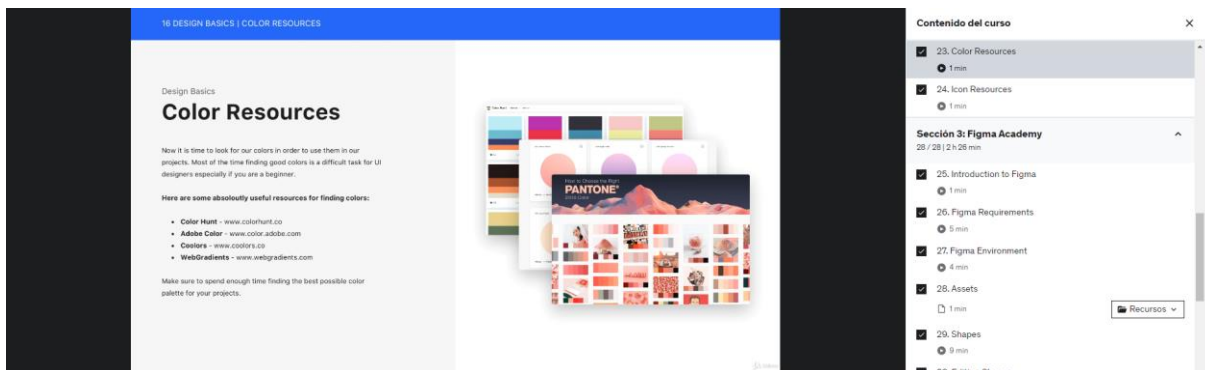
22. Font Resources

Some websites where it is possible to find and use different kind of fonts for free, one of the most popular and easy to implement is Google Fonts.



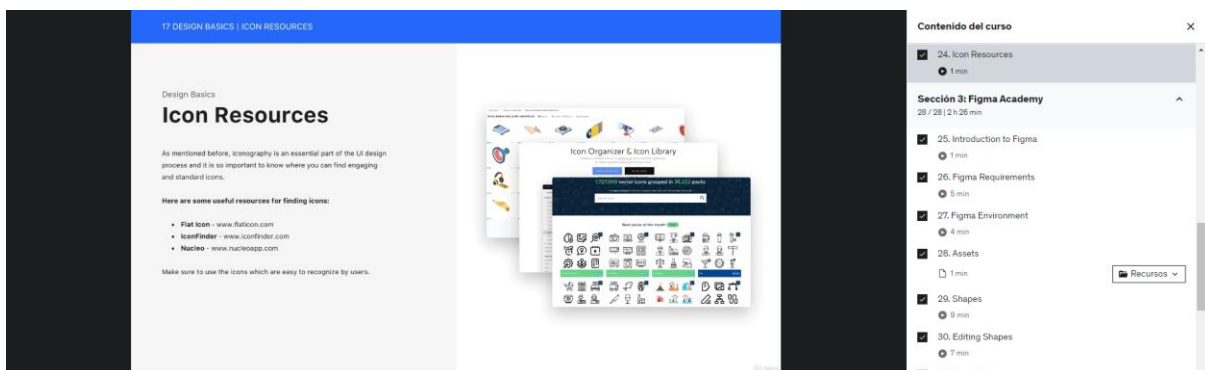
23. Color Resources

Since it is difficult to choose colors once you are starting with designs, this websites can help with information and inspiration to choose the right colors.



24. Icon Resources

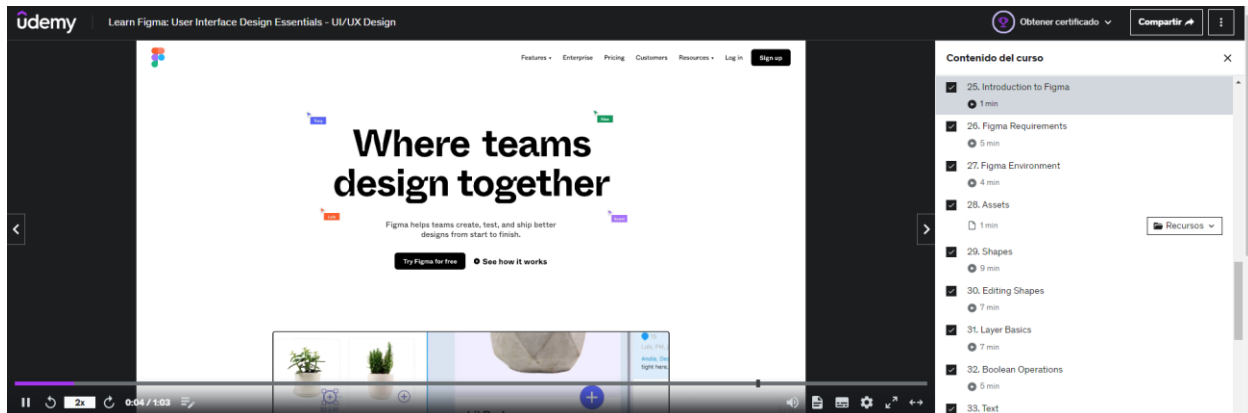
Again, do not reinvent the wheel and use the icons that are already available in some websites completely for free.



Section 3: Figma Academy

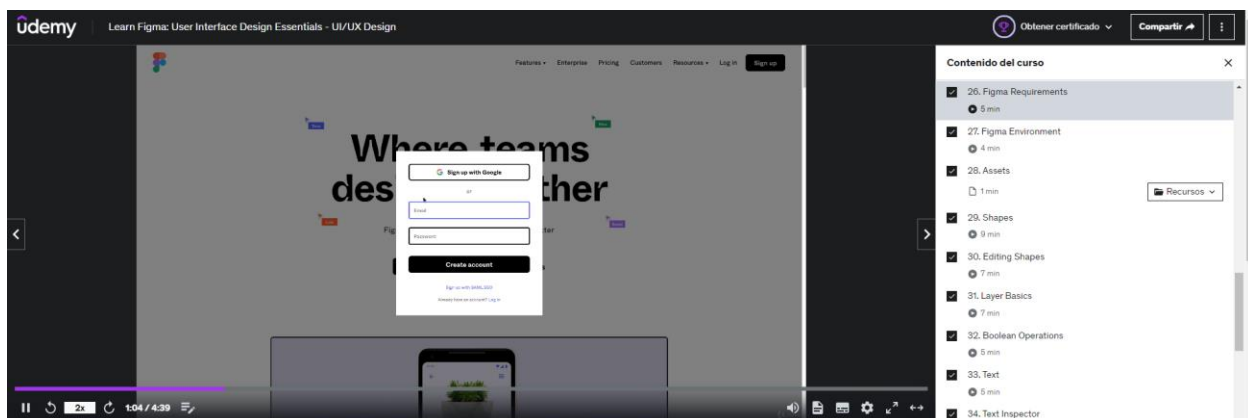
25. Introduction to Figma

Brief description of what Figma is and how to use it.



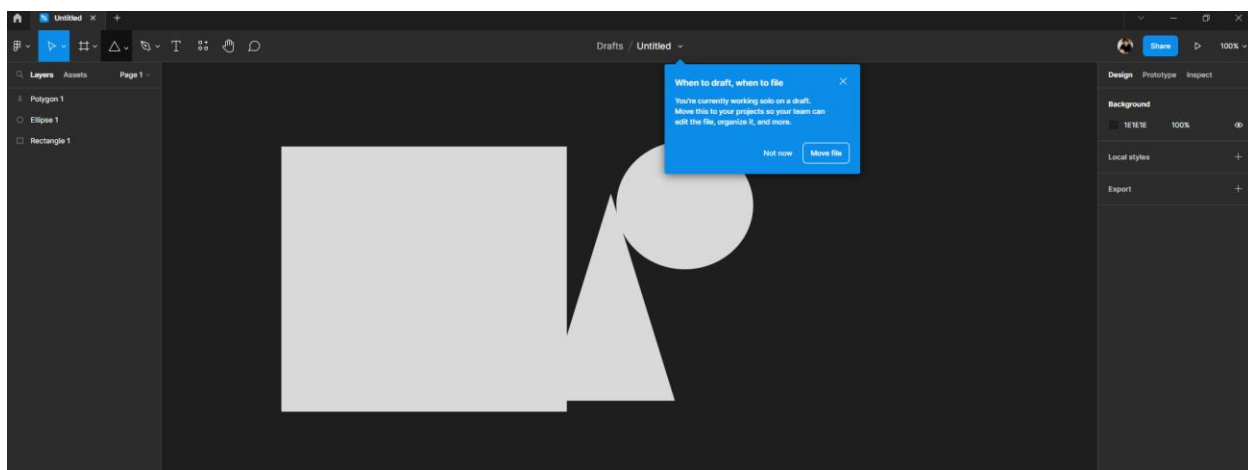
26. Figma Requirements

Getting Figma, creating an account working from the web browser or the app, create teams, etc.



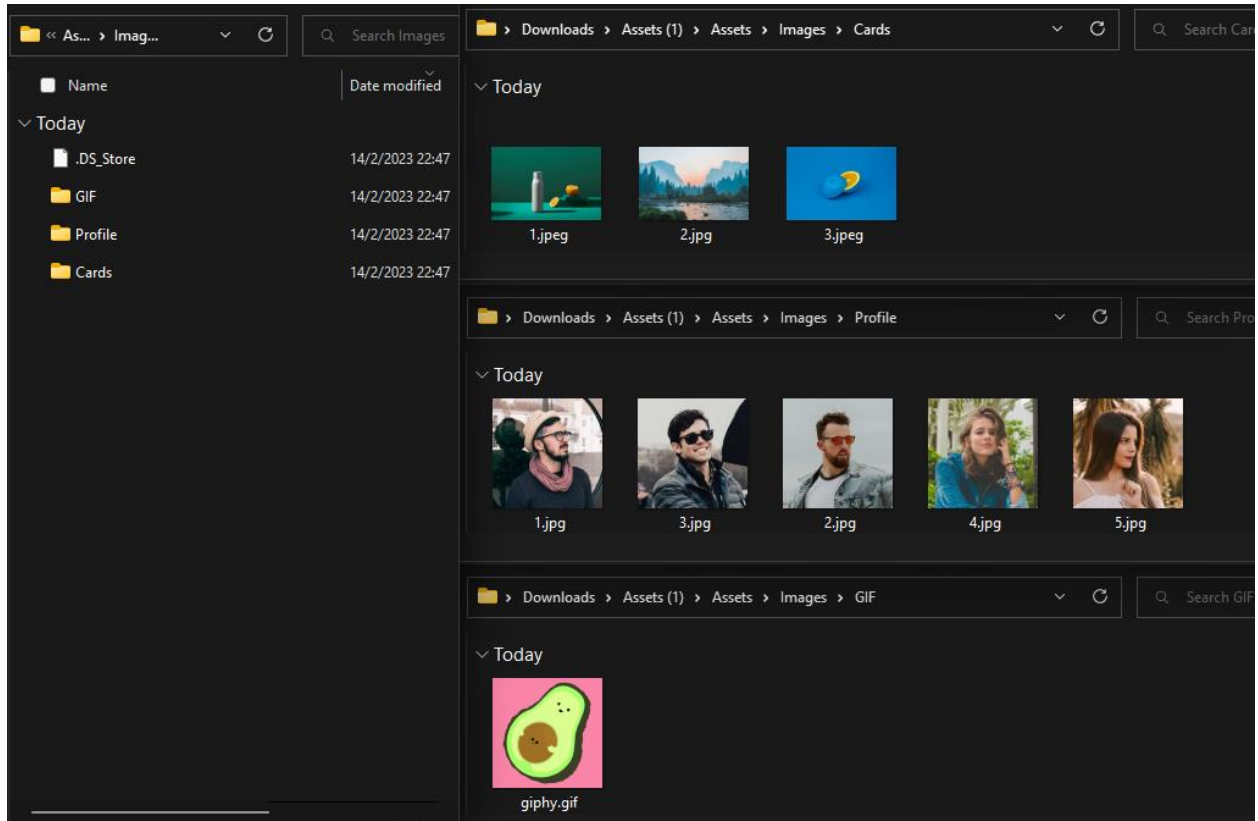
27. Figma Environment

First and quick look to all the options that Figma has, here is installed in windows using dark theme.



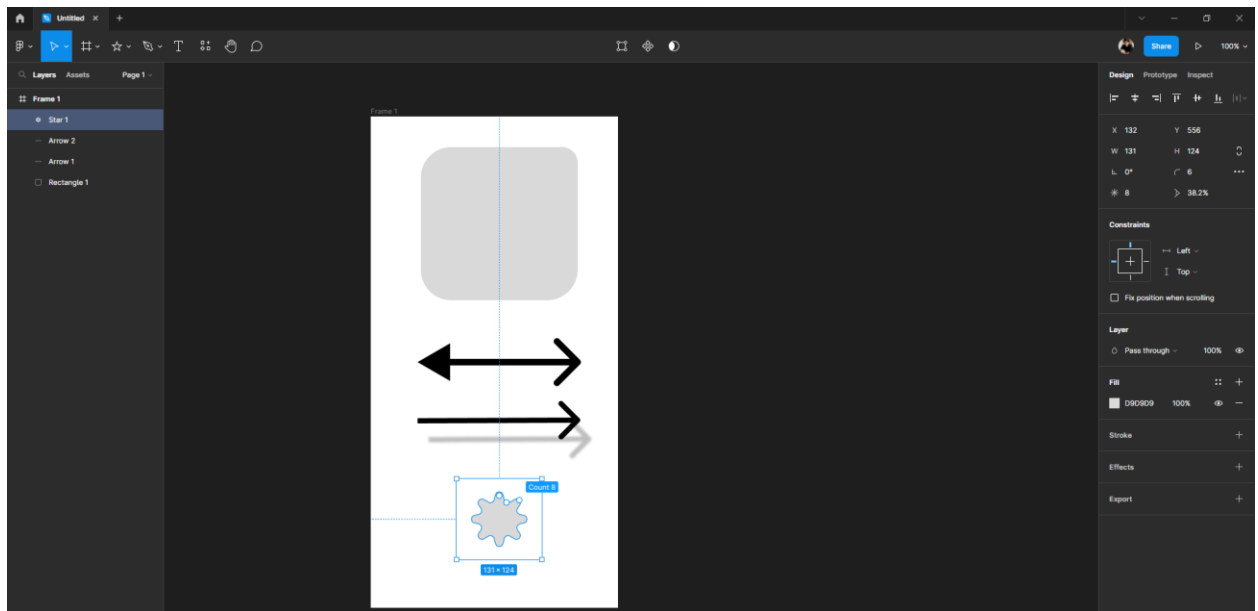
28. Assets

Some assets that will be use in the next classes.



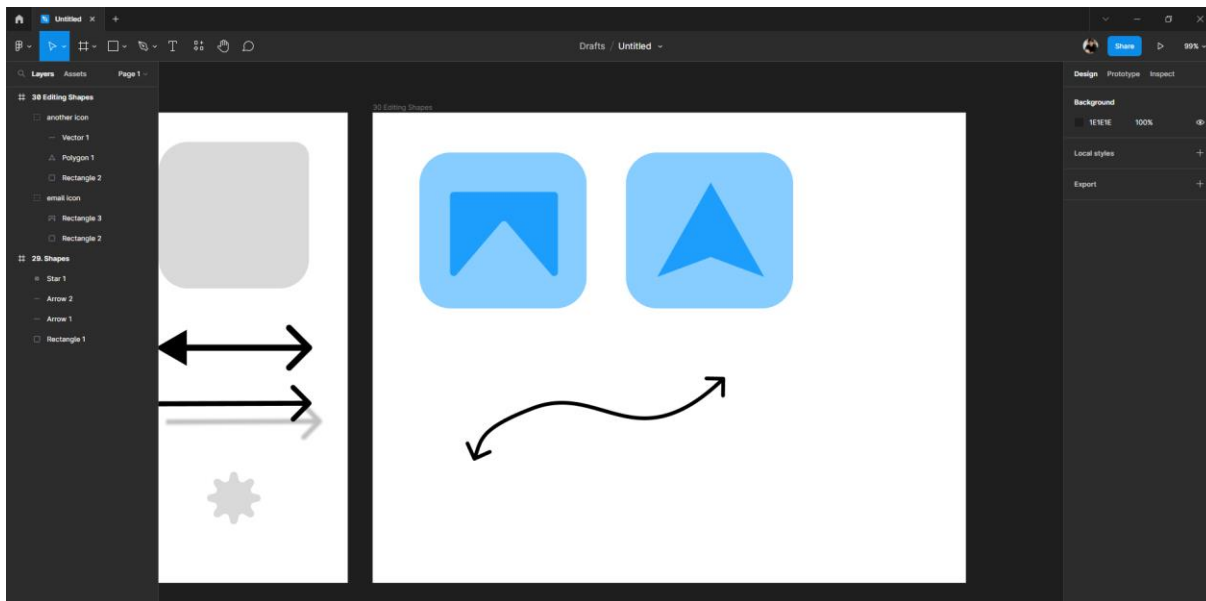
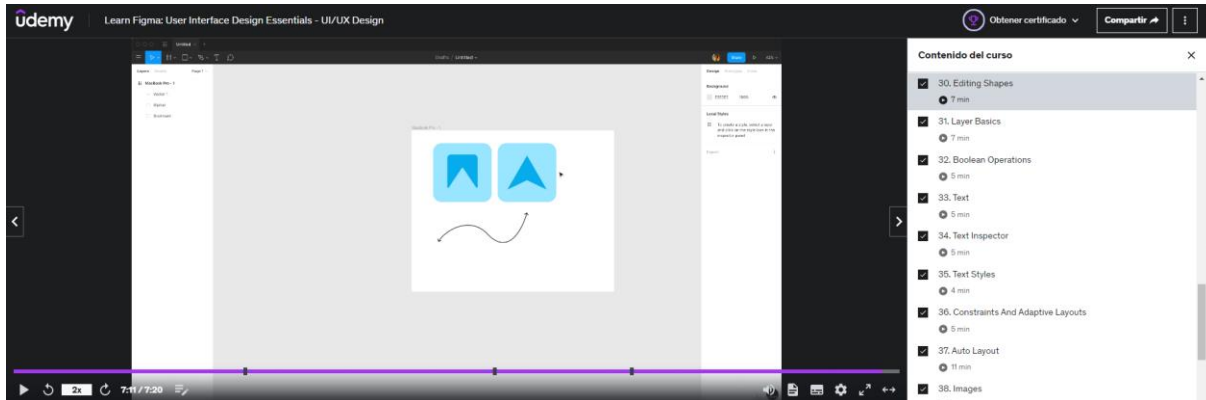
29. Shapes

Understanding the shapes and properties, like the sizes, shadows, positions, round borders, etc.



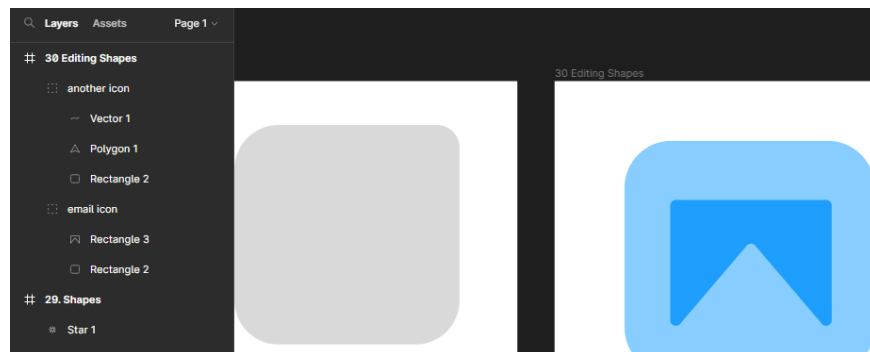
30. Editing Shapes

Here just showing how to make more changes in the shapes.



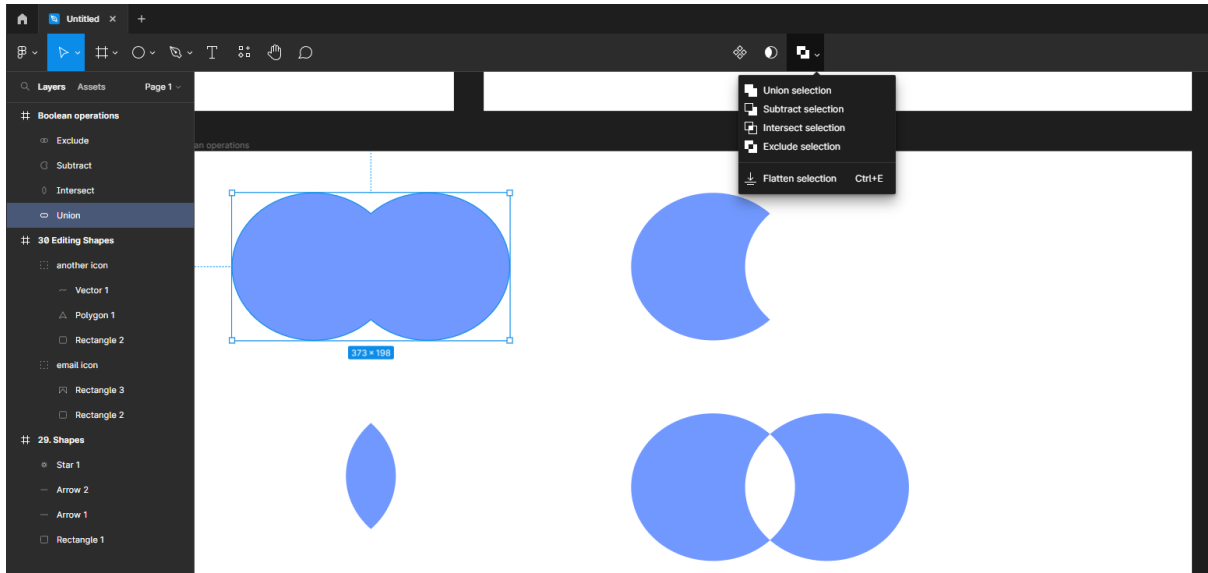
31. Layers Basics

Layers are in the left part, and they are useful to group some parts of the content that can be block or hide or just duplicate them to use the same whole element in other part.



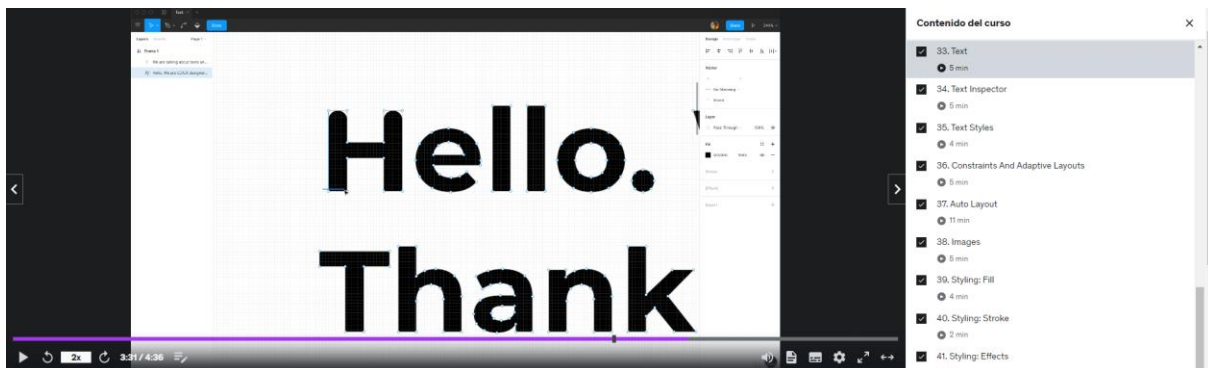
32. Boolean Operations

Union, Exclude, Subtract, Intersect.



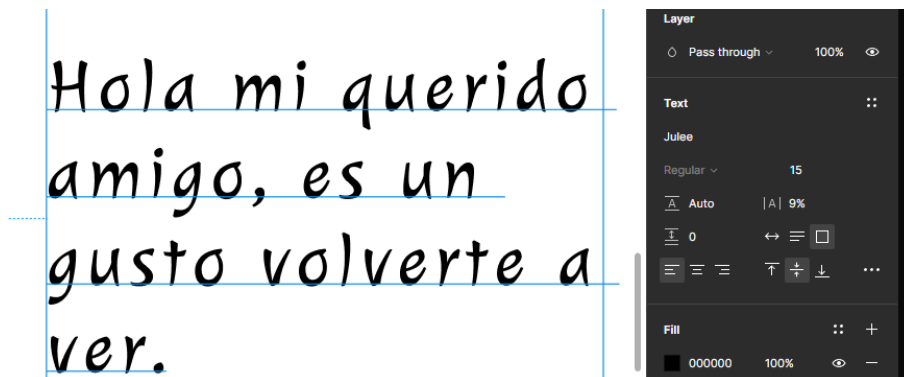
33. Text

Insert text is easy as press ctrl + T or also using the option from the top menu. The text can be transform to a vector to edit letter by letter if it is necessary.



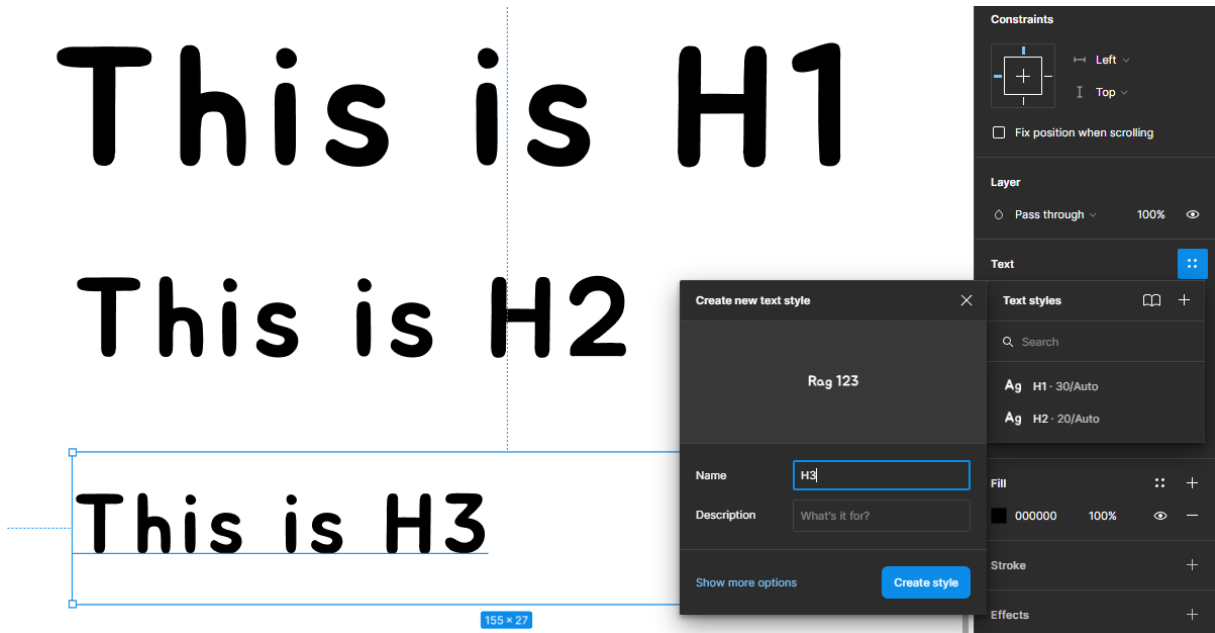
34. Text Inspector

This part is used to modify the properties of the text like the size, font, space, etc.



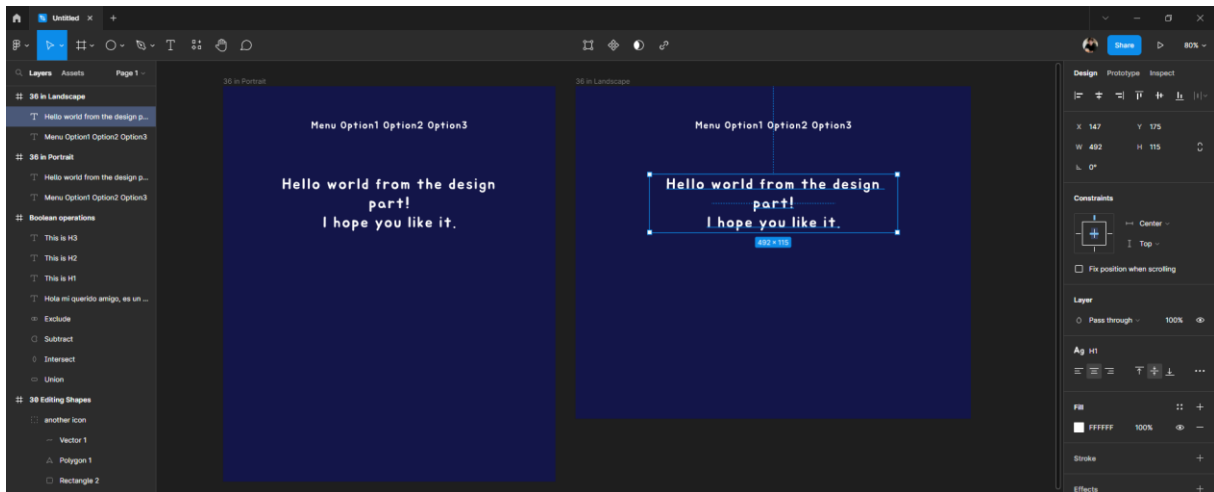
35. Text Styles

To normalize the project and use the same type of texts, you can create text styles, using for example the name of the tags in HTML (but for colors we need a color style too).



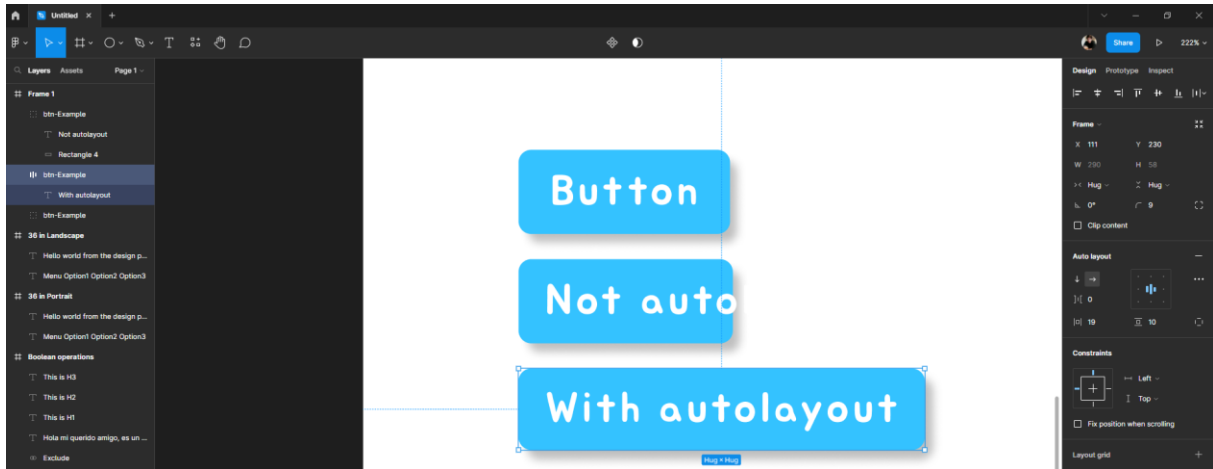
36. Constraints And Adaptive Layouts

To be able to create responsive designs that are adapted to the portrait or landscape screens. This option is in the right menu, with the properties of the elements. The element can be centered in horizontal or vertical or even both ways to keep it exactly in the middle.



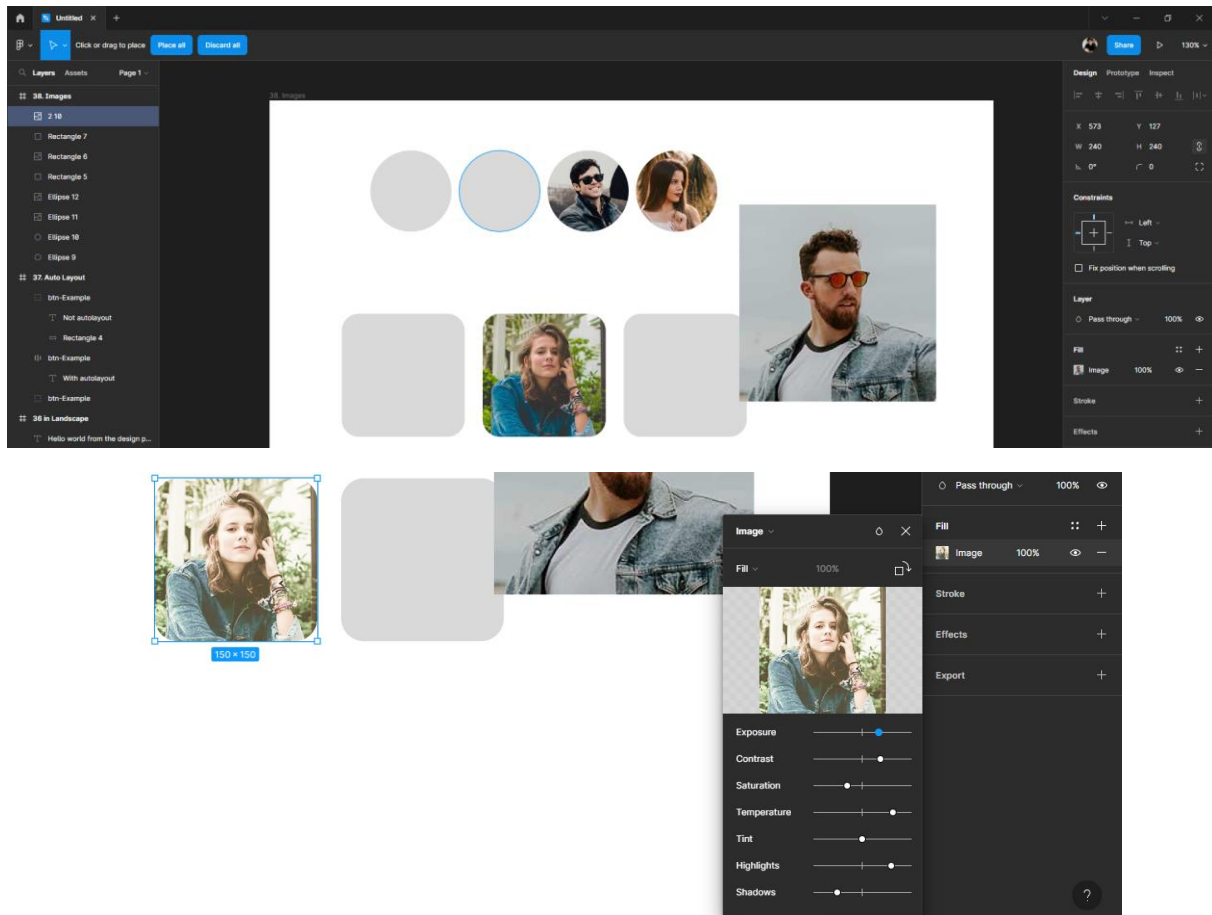
37. Auto Layout

To avoid resize elements that are in group, auto layout allows you to change one element and automatically change the size of other element related to that one. For example, with the text inside a button.



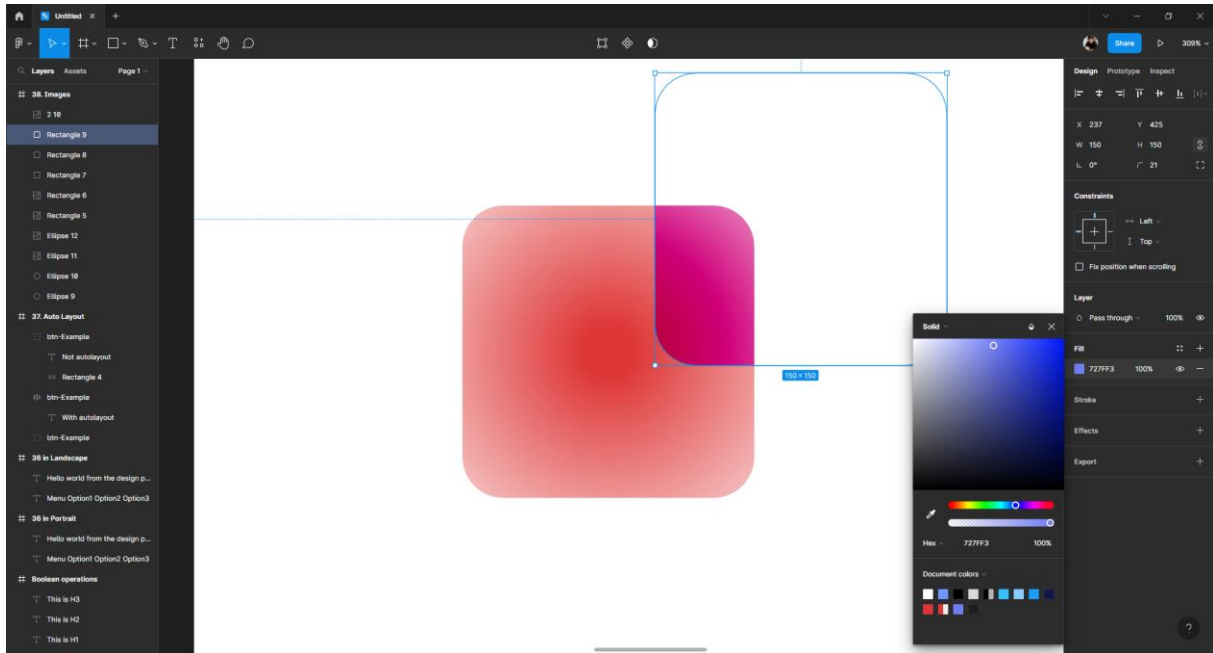
38. Images

Insert an image can be as easy as drag and drop an image from your computer but sometimes it is necessary to insert the image with an specific shape. Also, it's possible to change image properties.



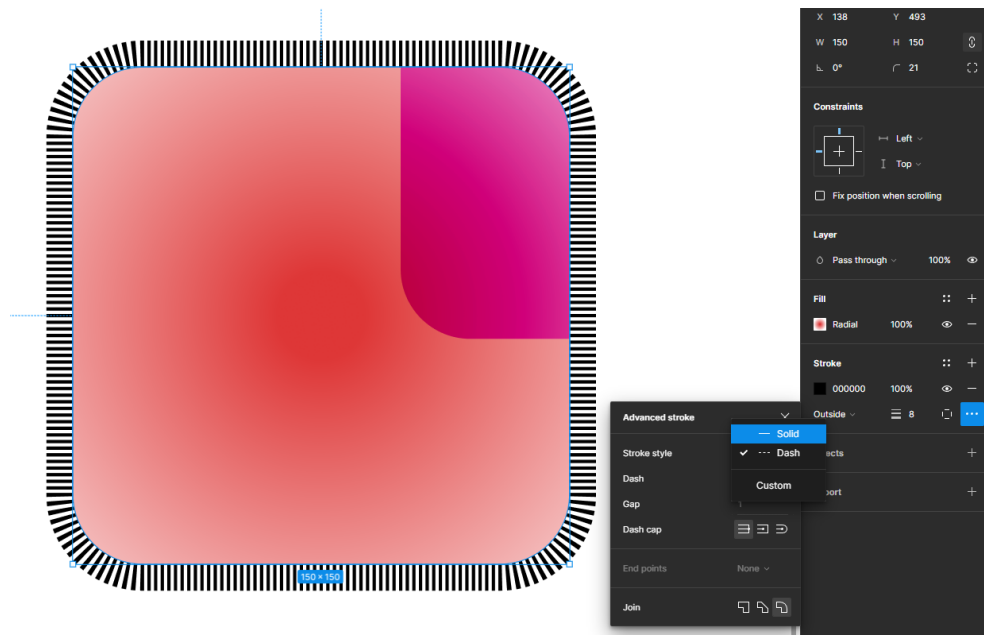
39. Styling: Fill

This option gives the possibility to set a color if it is solid, linear, etc. Or if it is a picture or another kind of behaviors.



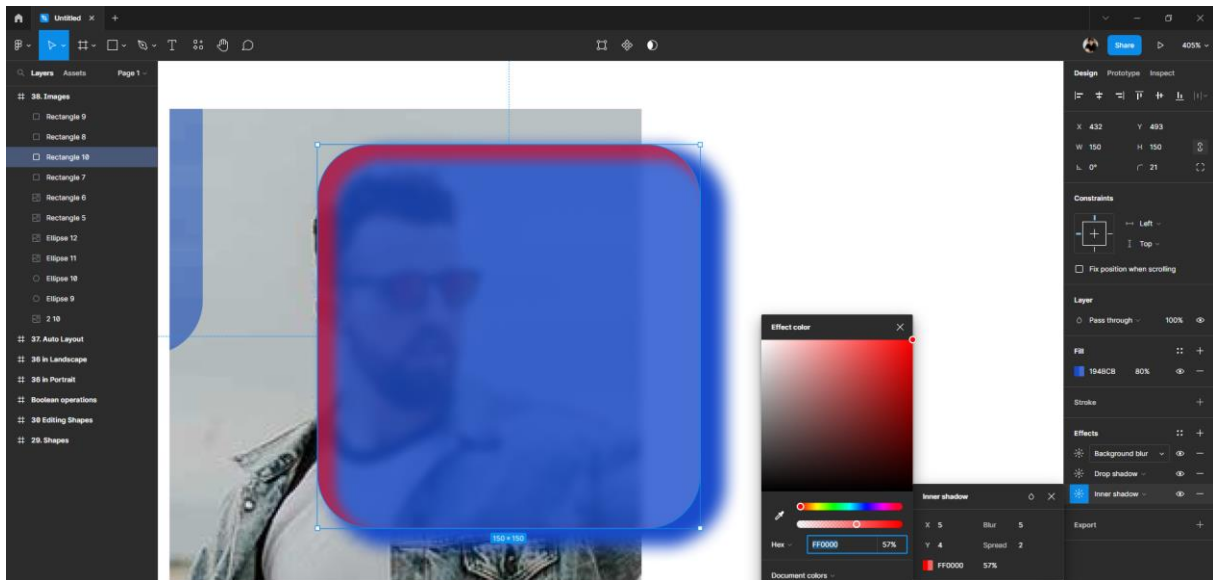
40. Styling Stroke

Like the fill option, this also allows multiple properties that can be added or modified.



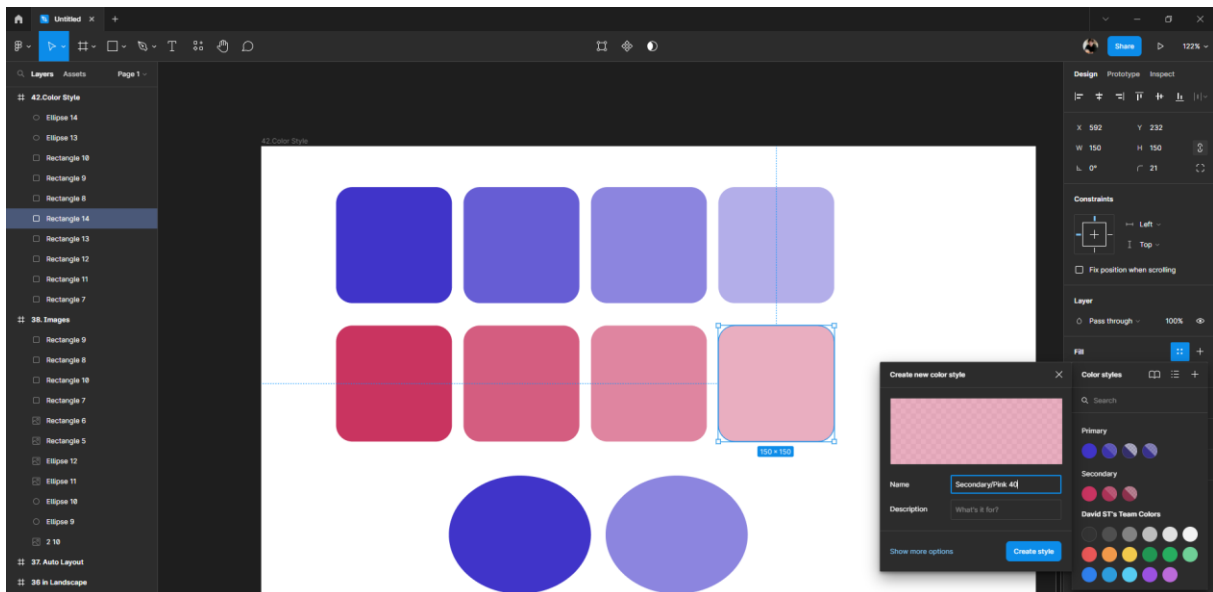
41. Styling: Effects

It is possible to add some effects like shadows and also background blur, this can be set in front of an image or set the image as a background and then make it blurry.



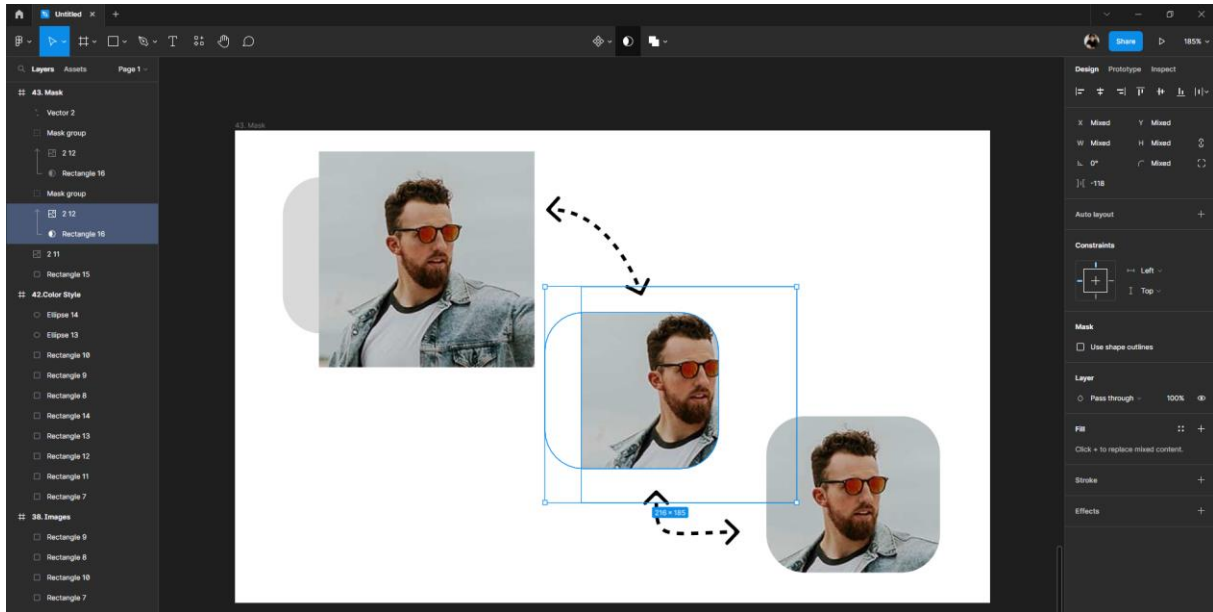
42. Color Style

This part is important to create a style that can be used in different elements, so it is easy just to set the specific style and if a change is needed, then it is not necessary to go element by element changing that color because all will be changed just in the style itself.



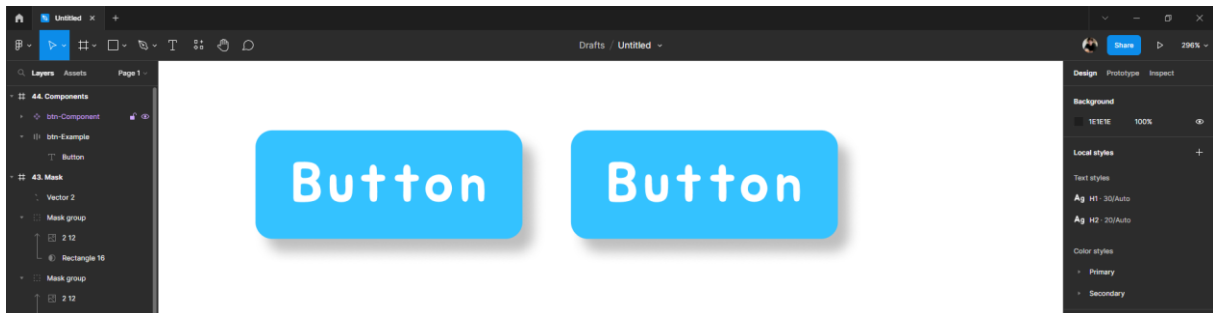
43. Masking

Used to make images or even other elements in a specific shape.

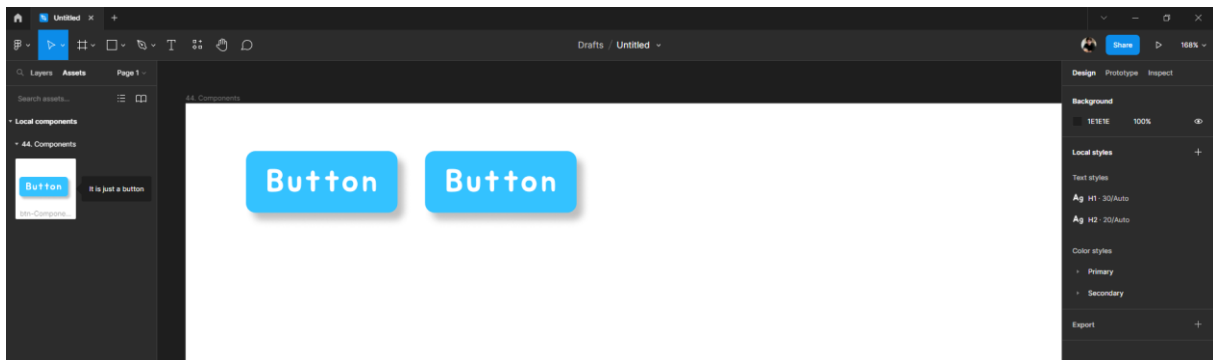


44. Components

The main point is created once and use in multiple part, like the styles but now with a group of elements that can be sections, buttons, menus, etc.

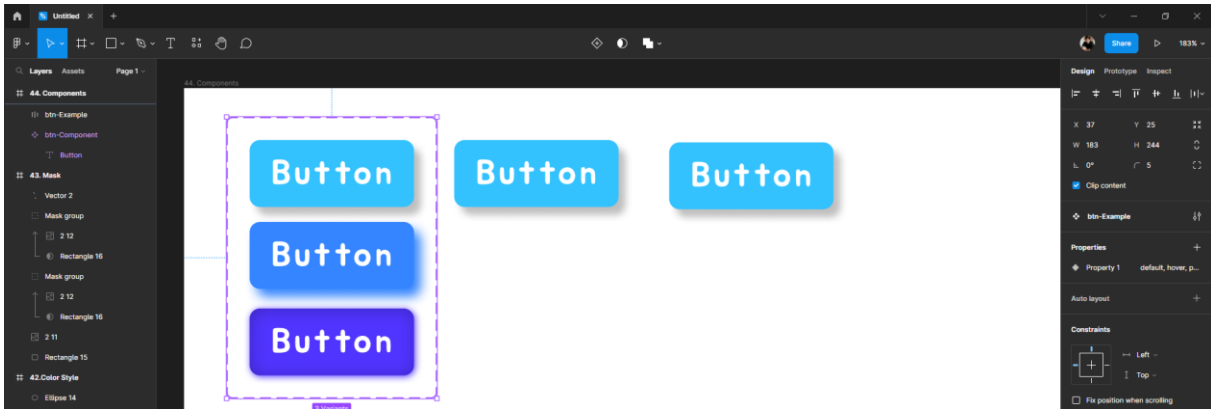


These components can have a description and even a link for the documentation. And to use them is just go to the Assets in the top of the left menu and then you can drag and drop.

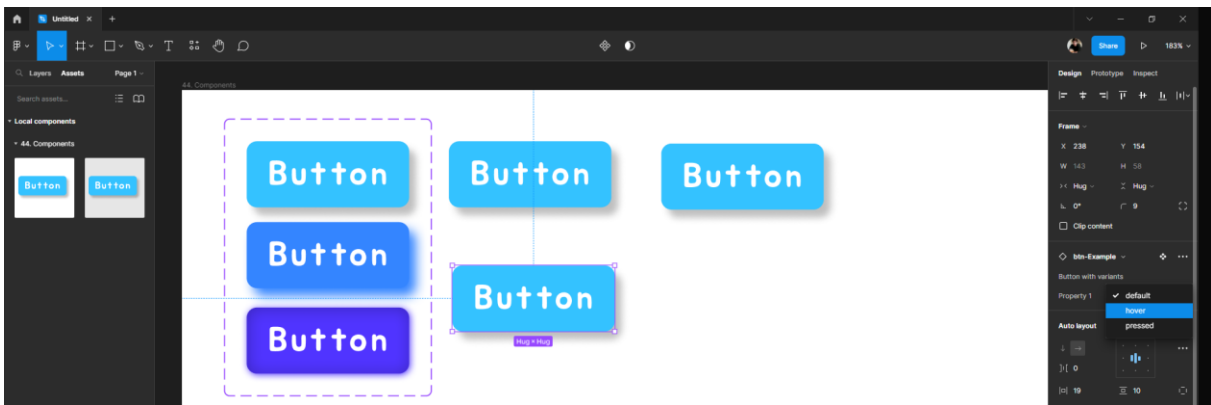


45. Variants

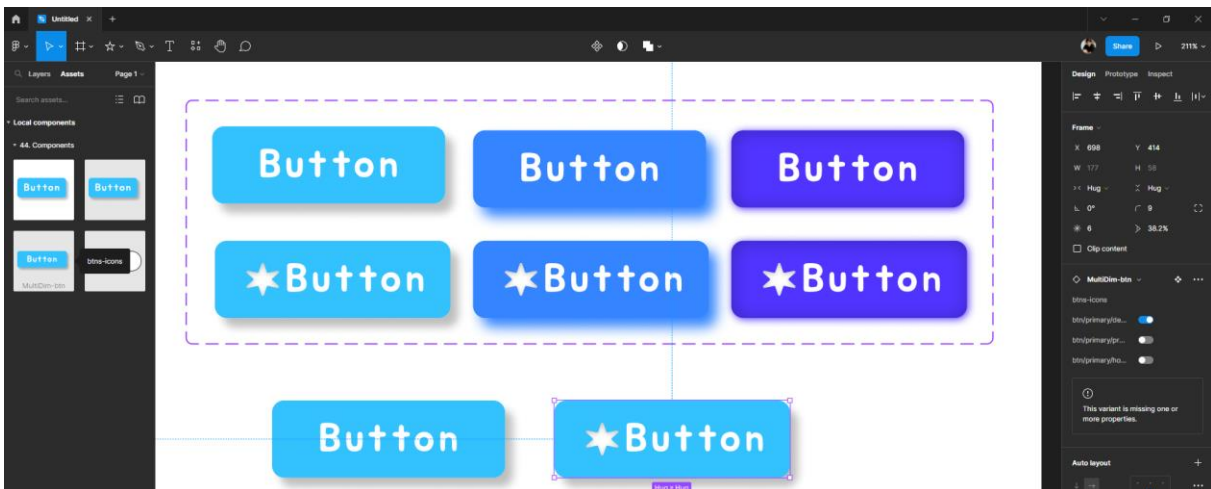
A good example is what if we want to have a button that has different states like when it is pressed or hover, then is when we can use the variants.



And now we still have one component which is the button but in the properties we can change the variant.

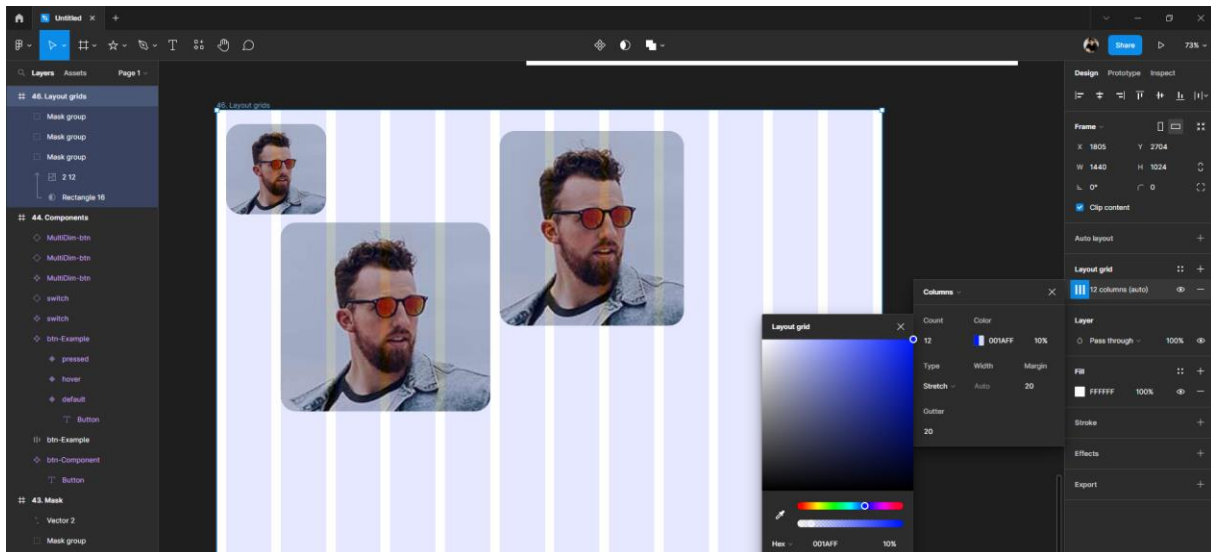


There are one-dimension variant and multi-dimension variant. This can be in the case that something is added to the normal one-dimension variant. And using "on" or "off" in the name allows us to use a switch in the properties to add or remove that variant.



46. Layout Grids

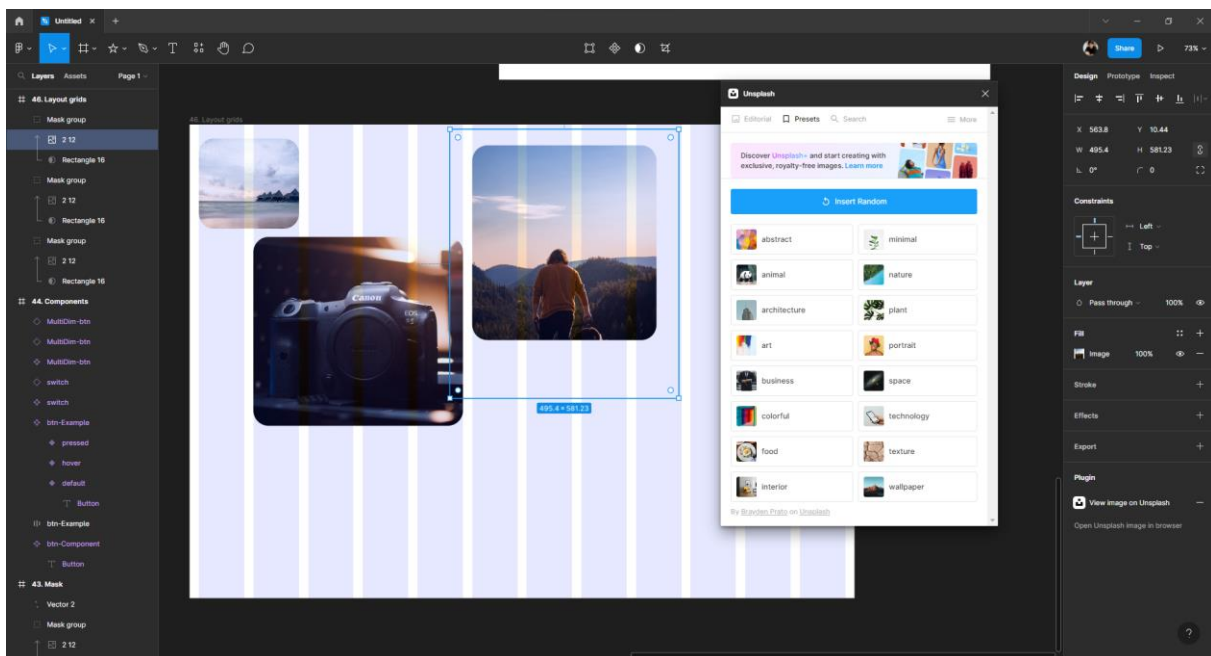
This is very useful to set the elements in a good position following a pre-defined structure, one of the examples can be using bootstrap when the width of the row is split in 12 columns.



47. Plugins

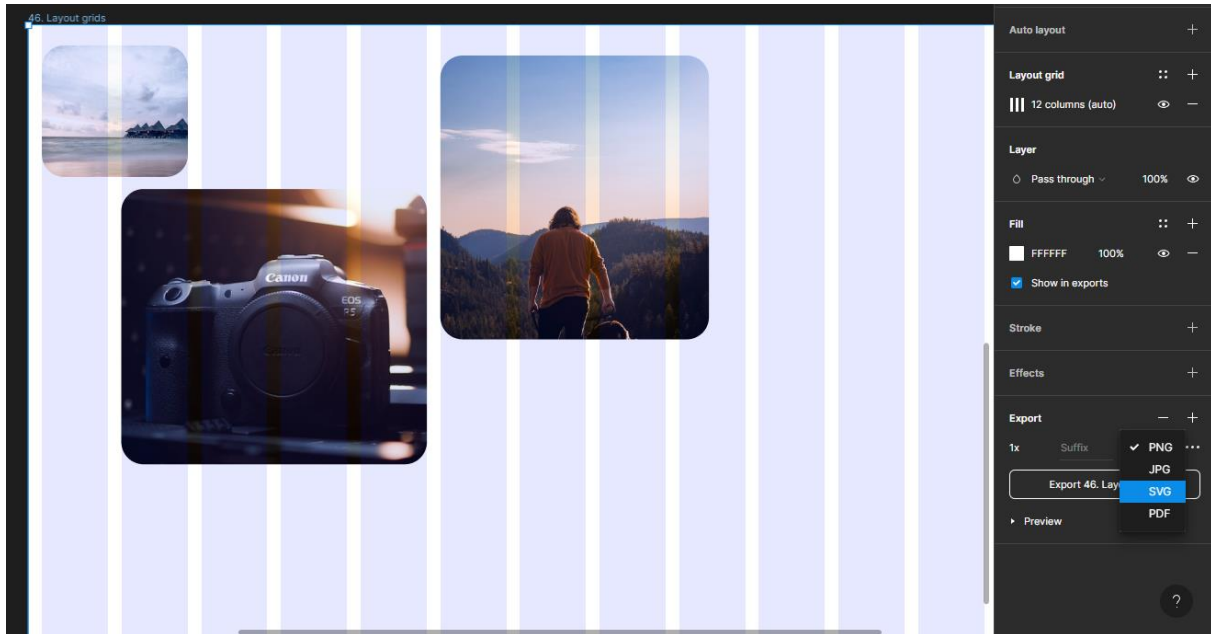
Figma has a section with all the different plugins that are so easy to install and with good documentation to use. In this example we use Unsplash, a plugin to insert pictures.

There are a lot of different kind of plugins to different uses that can help you to save time. It is always important to remember in not reinvented the wheel. Plus, you can always create your own plugin and even share it with the community of Figma.

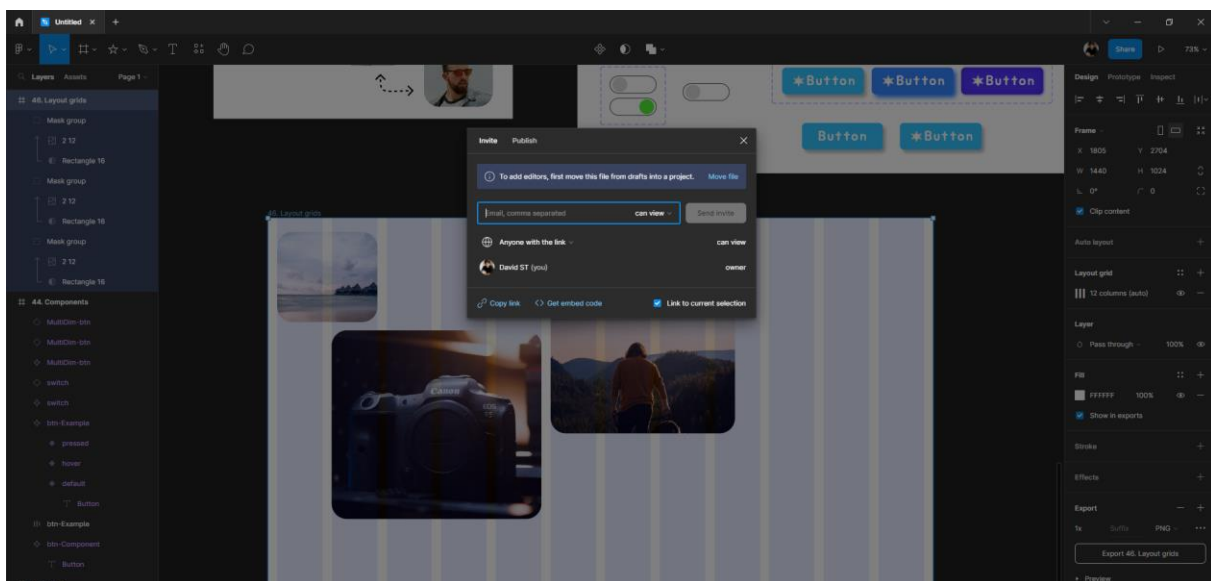


48. Exporting

For exporting it is just select the element or group of elements, can be even a frame and then go to the right menu, in the bottom, the last option is Export and allows you to export in different formats, size and a suffix for the name.

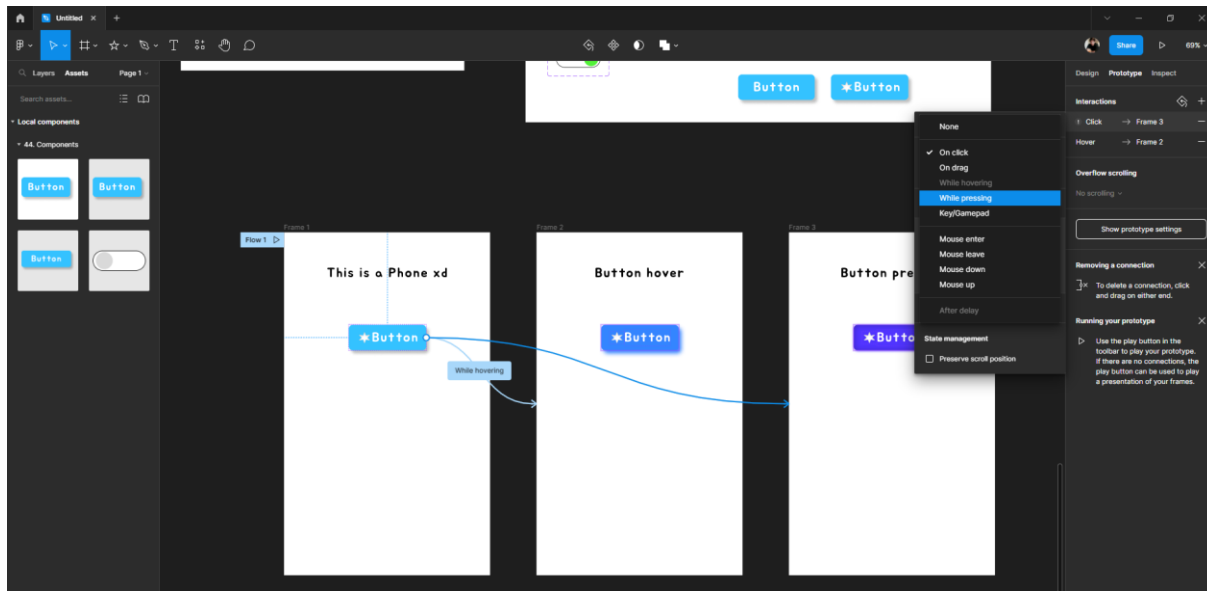


But in the top right corner you can find the option to share, this can be for only view or edit if you want to share your designs with more people. For the edition Figma only allows a limited number of users that can work on it if you have a free account. But there is not limit for the views, the link can be copied and shared without problems.

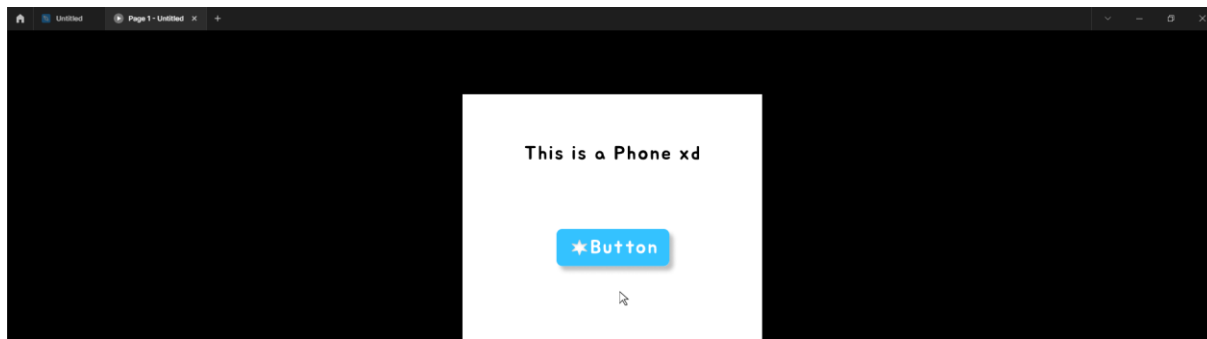


49. Prototyping

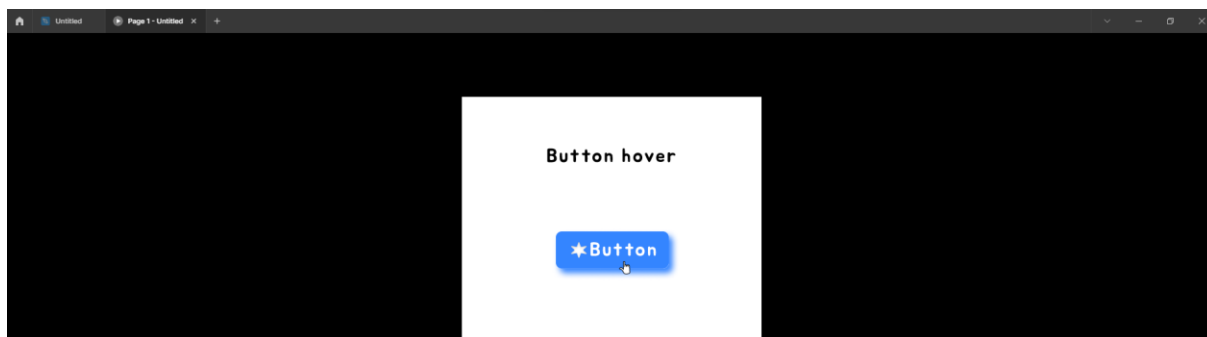
This helps us to see or to show how the design should work, it has different options to go from one frame to another or we can also say to go from one screen to another.



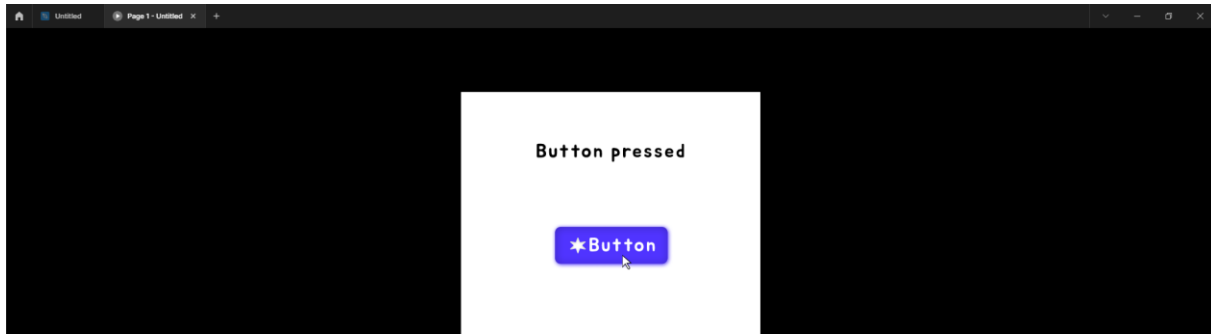
Once the prototype is done, choosing the right interactions, in the right top corner there is the option to run the prototype. There you will see the screens you set with prototyping.



And once we test the screens should change in the way it was set in the prototype.

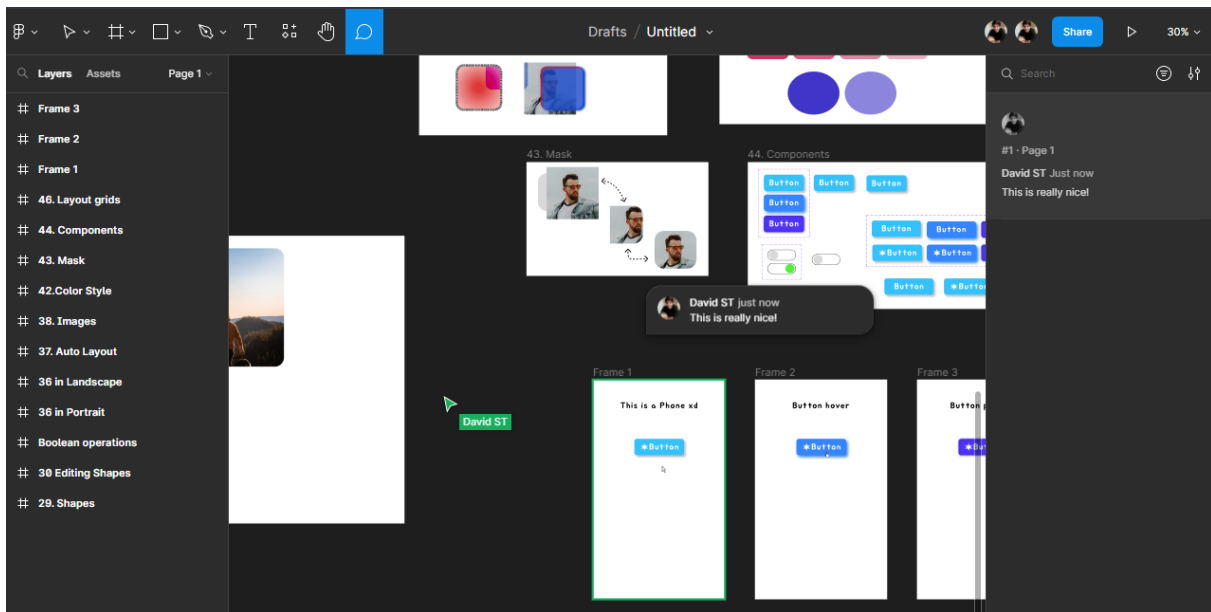


Here I had to create a mouse icon and a hand icon because it was not possible to see them with the screenshots. But it is working how it should.

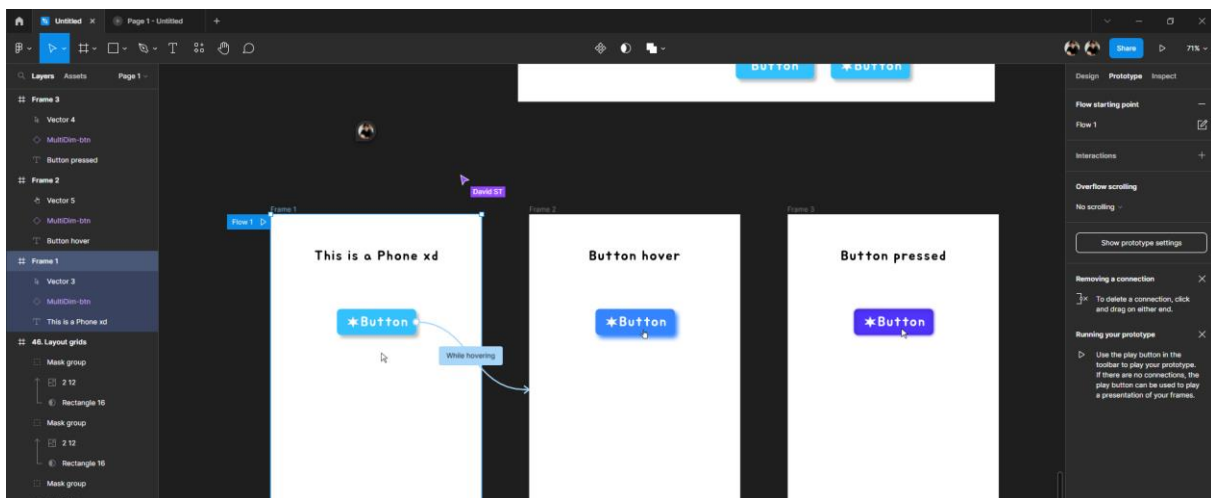


50. Multiplayer & Commenting

You can always set a comment in every part of the design, so another collaborator or viewer can see it. Also you can always see where a collaborator is working now if she/he is in the current project.

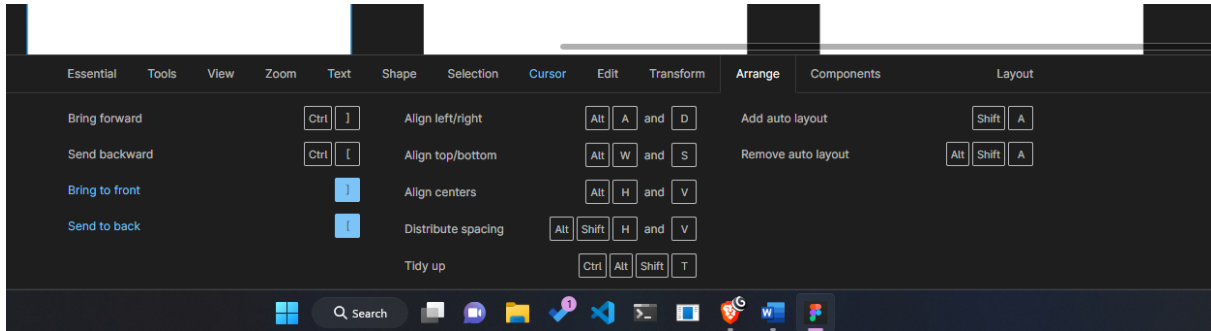


The previous screenshot was from the browser and the next one is a screenshot from the Figma App.



51. Keyboard Shortcuts

Shortcuts have some difference between macOS and Windows. To see all those shortcuts it is just to go to the right bottom part of the program and click on the interrogation icon.



52. Final Projects

Here we can find a zip file with different elements that the teacher did during the classes.

This is just the summary of all the tools and components created in this section of the course.

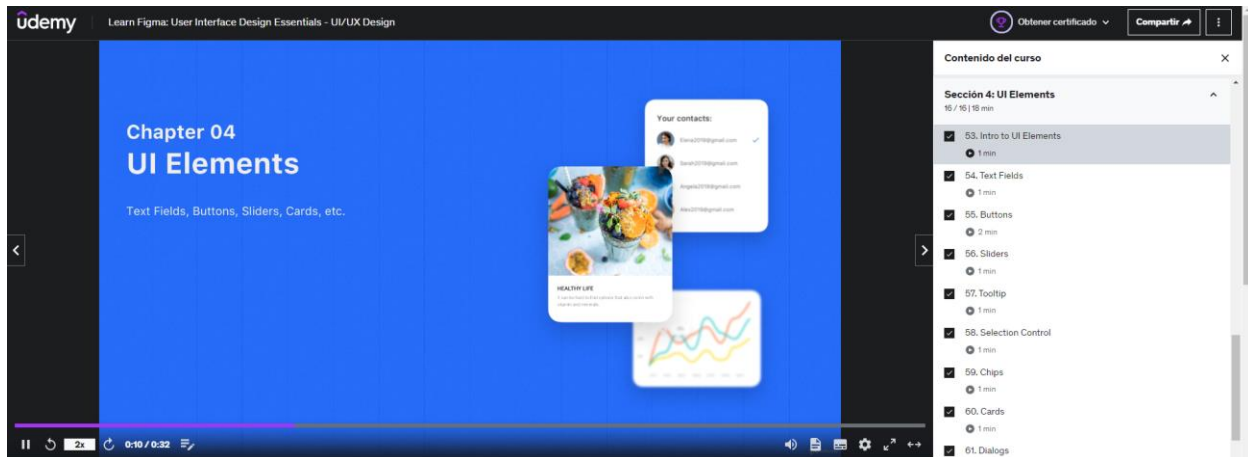
A screenshot of a Windows File Explorer window showing the contents of a zip file named 'Final+Projects.zip'. The window is open to the 'Downloads' folder. The file list is as follows:

Name	Type	Compressed size	Password ...	Size	Ratio
__MACOSX	File folder				
Auto Layout.fig	FIG File	19 KB	No	19 KB	4%
Boolean Operations.fig	FIG File	16 KB	No	16 KB	5%
Components.fig	FIG File	14 KB	No	14 KB	5%
Constraints and Responsive Lay...	FIG File	17 KB	No	18 KB	6%
Editing Shapes.fig	FIG File	13 KB	No	14 KB	5%
Effects.fig	FIG File	178 KB	No	179 KB	1%
Images.fig	FIG File	10,714 KB	No	10,712 KB	0%
Plugins.fig	FIG File	541 KB	No	541 KB	1%
Prototyping.fig	FIG File	10,368 KB	No	10,365 KB	0%
Stroke.fig	FIG File	184 KB	No	185 KB	1%
Text Styles.fig	FIG File	16 KB	No	17 KB	7%
Text.fig	FIG File	44 KB	No	45 KB	4%

Section 4: UI Elements

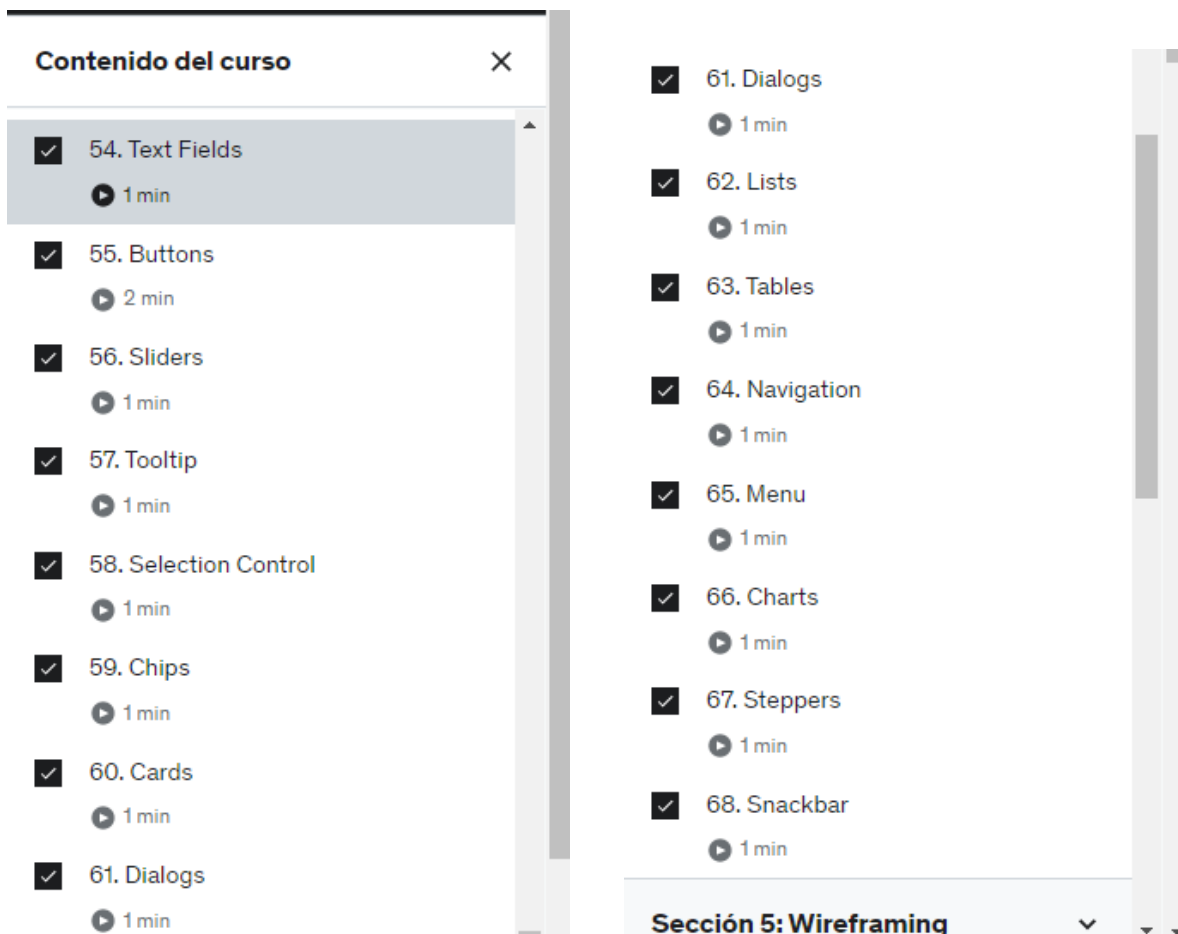
Intro to the UI Elements

Brief explanation of what are we going to see in the next classes, to understand better all the UI Elements. More theory coming.



The UI Elements in this section

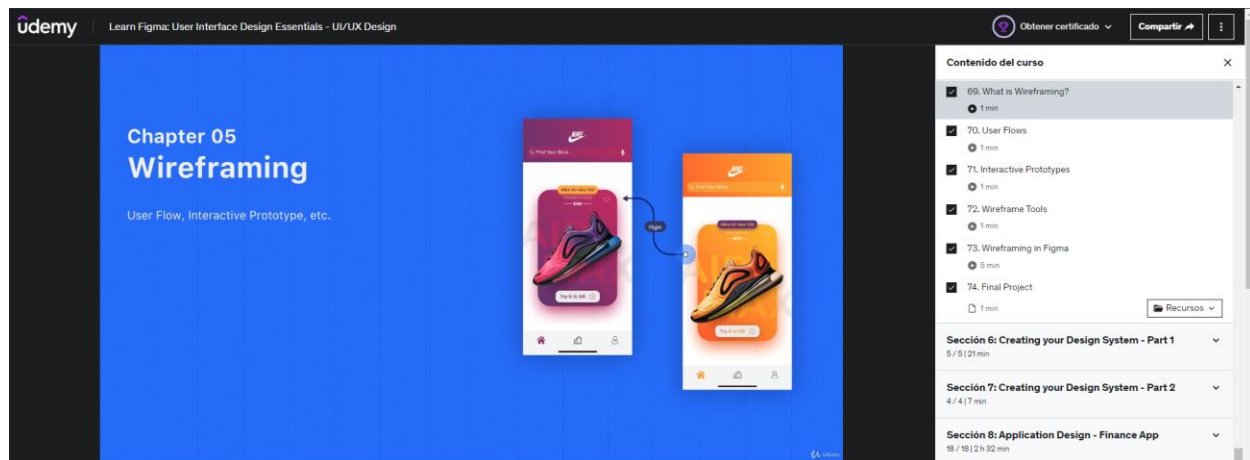
This are all the elements that see in the next classes.



Section 5: Wireframing

Introduction to the Wireframing

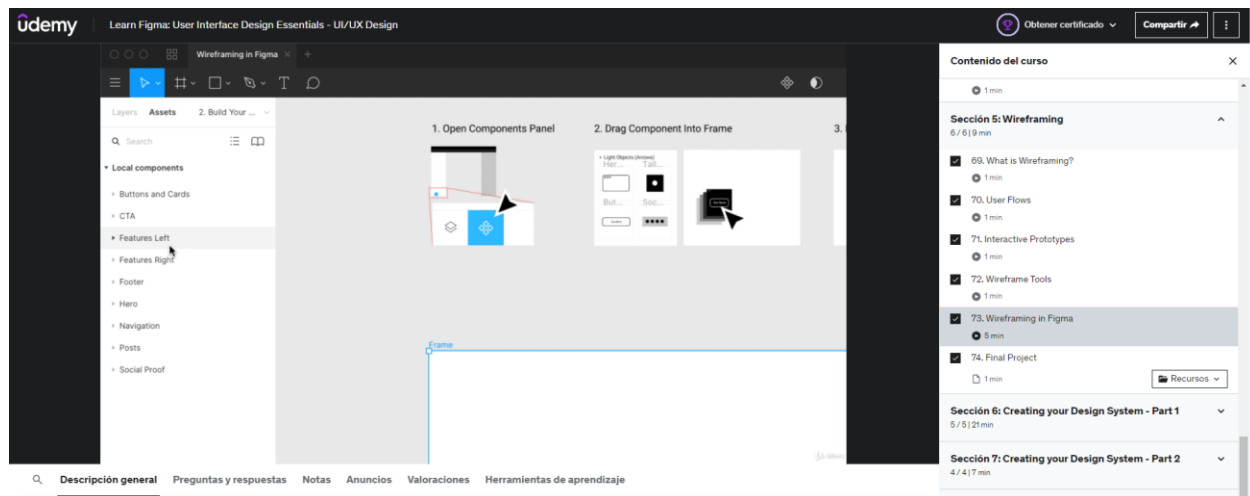
The Wireframe is like a blueprint of a machine, we can see all the details of the project and the initial state. And even when Wireframe is confused with Prototyping like a same thing, the truth is that Wireframe has low-fidelity design and Prototype has High-fidelity design, dynamic and interactive, even almost like the final product.



More information about Wireframe and Prototype

Next classes are more about Theory in the wireframe and prototype itself. In the previous classes we already use the prototype to see how interact with a button when it is hover or pressed.

In one part it is mentioned that Figma also have the option to create a wireframe, and this is show with a project that Figma gives to try out using pre-made components and a pre-made design.

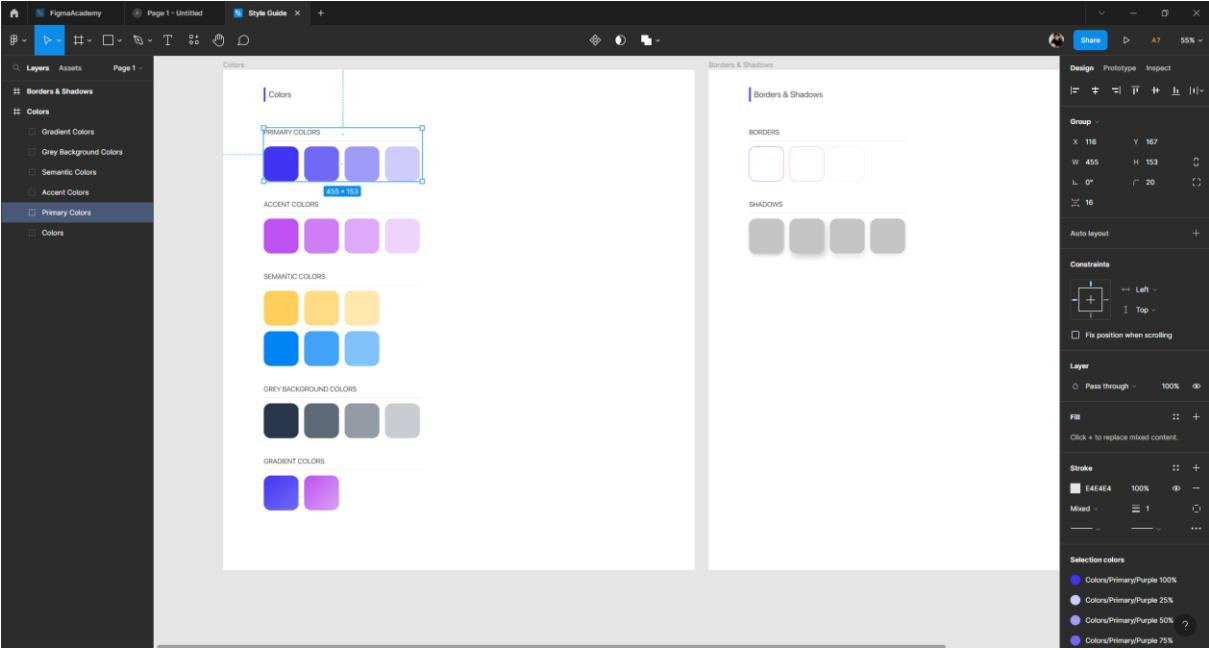


Section 6: Creating your Design System – Part 1

Introduction Color Style

This part is to understand the importance of the colors in the designs and most important how to create styles in Figma, so it is easier to make changes to a group of different elements without going to each element and make the change there.

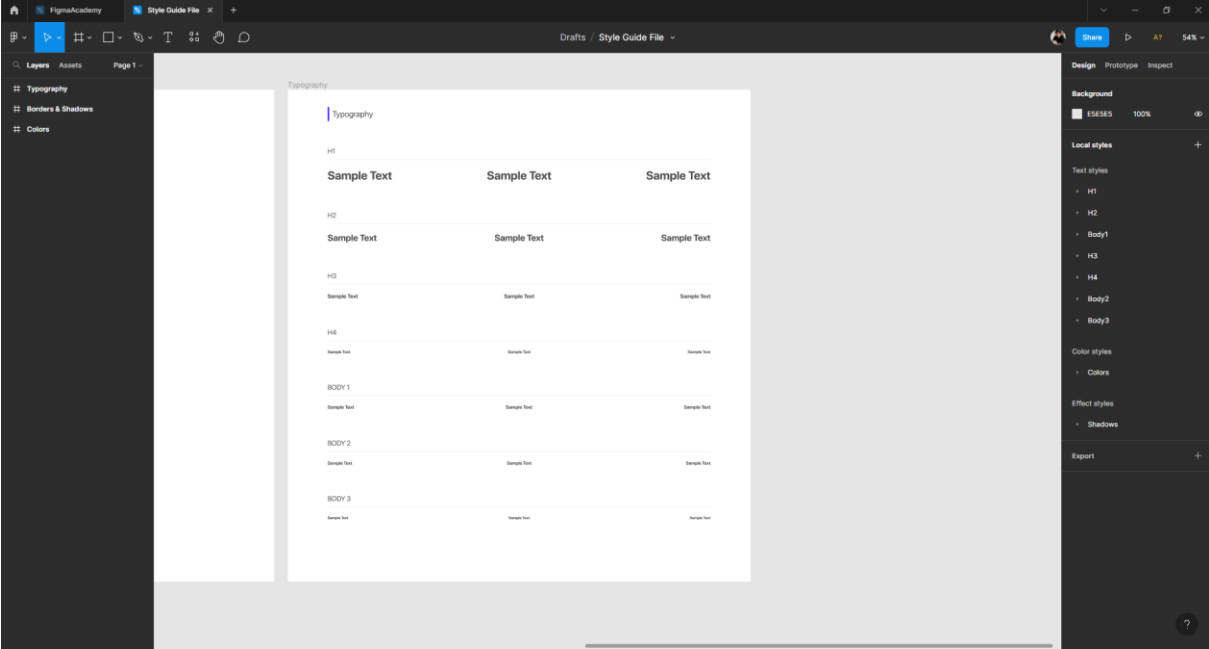
The most important color is the primary, secondary, accent, semantic, grey backgrounds, gradients. In the previous classes we already use some of these options to create styles. Also, the borders and shadows can make a big impact in some elements.



Section 7: Creating your Design System – Part 2

Introduction to typography

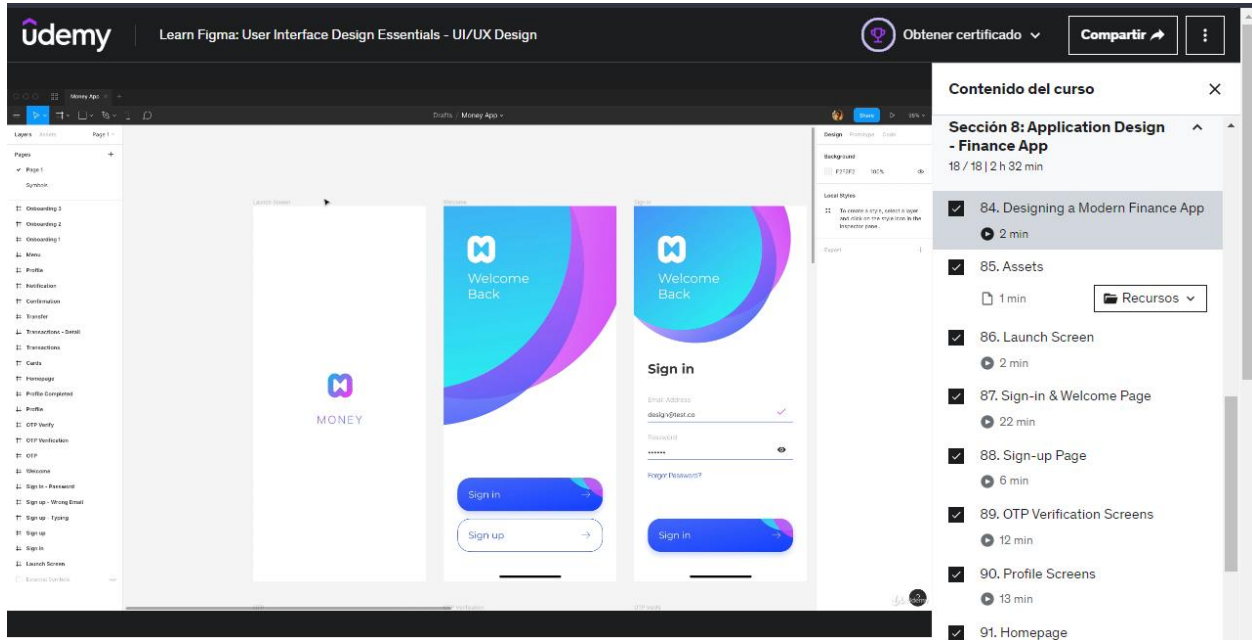
It is important to define the fonts, maximum 2 types but also defining the size, the weight or also how bold it looks and the most important which is a guide of where every text is going to be use. Like H1, H2, H3, body, and others that are necessary for the project.



Section 8: Application Design – Finance App

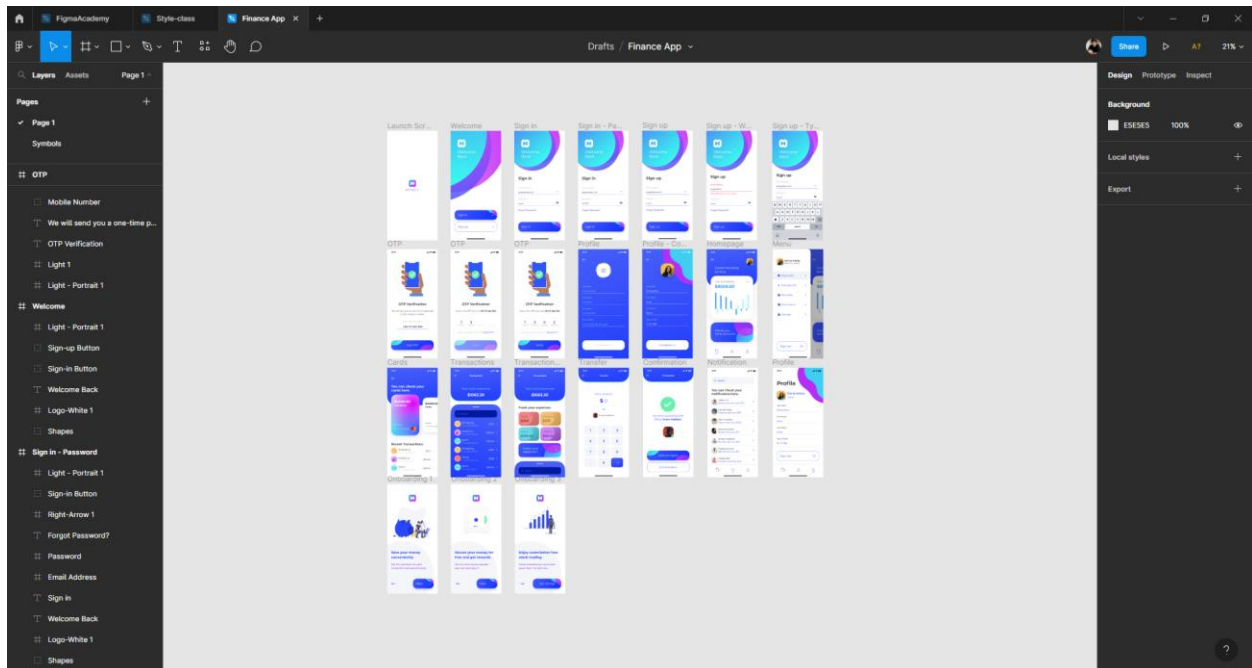
Designing a Modern App

First, we have a quick look of what are we going to create in the next classes, screen by screen using all the knowledge from the previous classes. But for this project it is necessary to download the files or assets that the teacher gives.



Result of the designed app

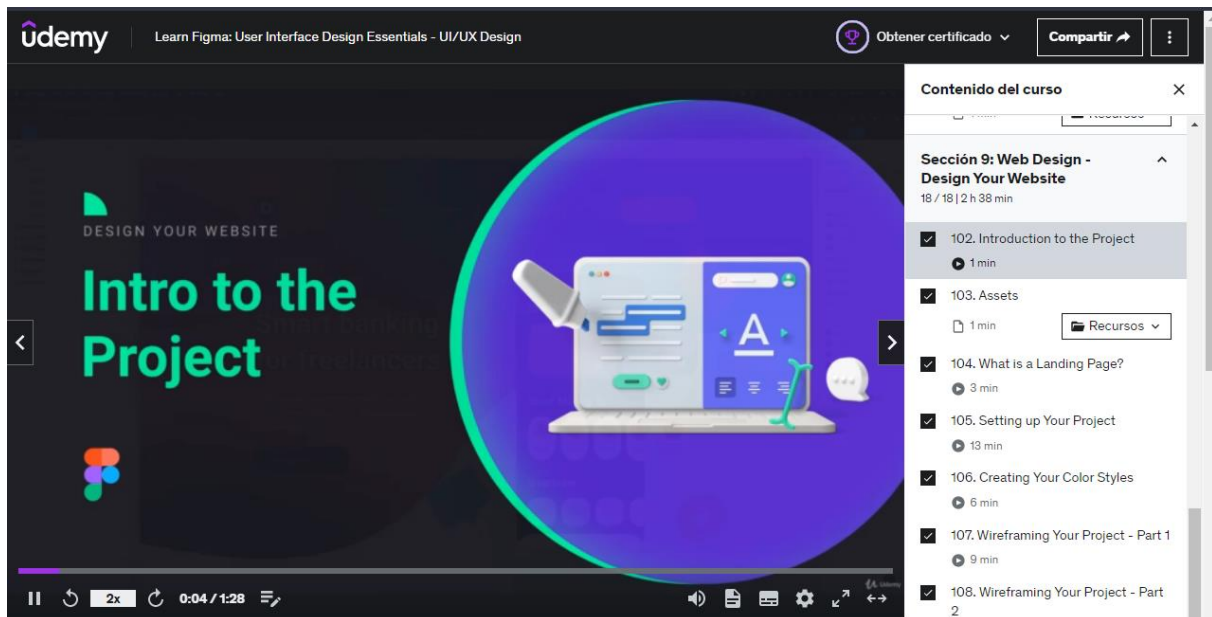
The only thing this design needs is the prototyping can see how it will work.



Section 9: Web Design – Design Your Website

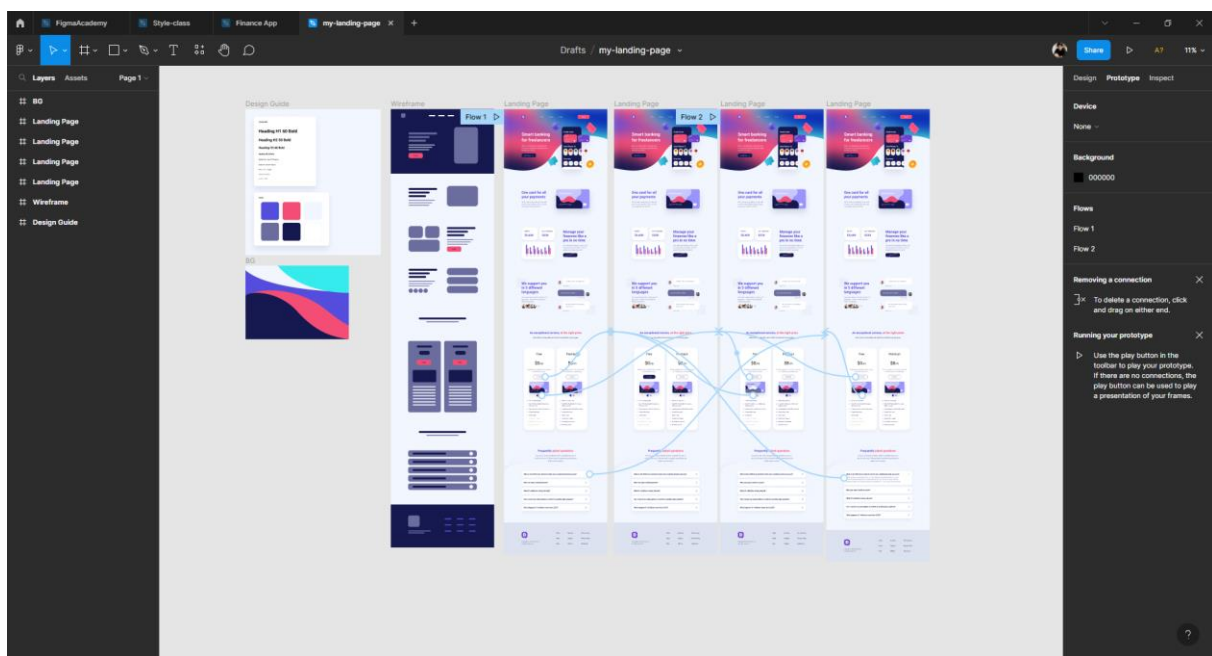
Introduction to the Project

First, like with the other project, just a quick view of how it will look the final project and mention some new topics, specific from web designs that will be cover in the next classes. Again, the assets are available to download.



Result of the designed website

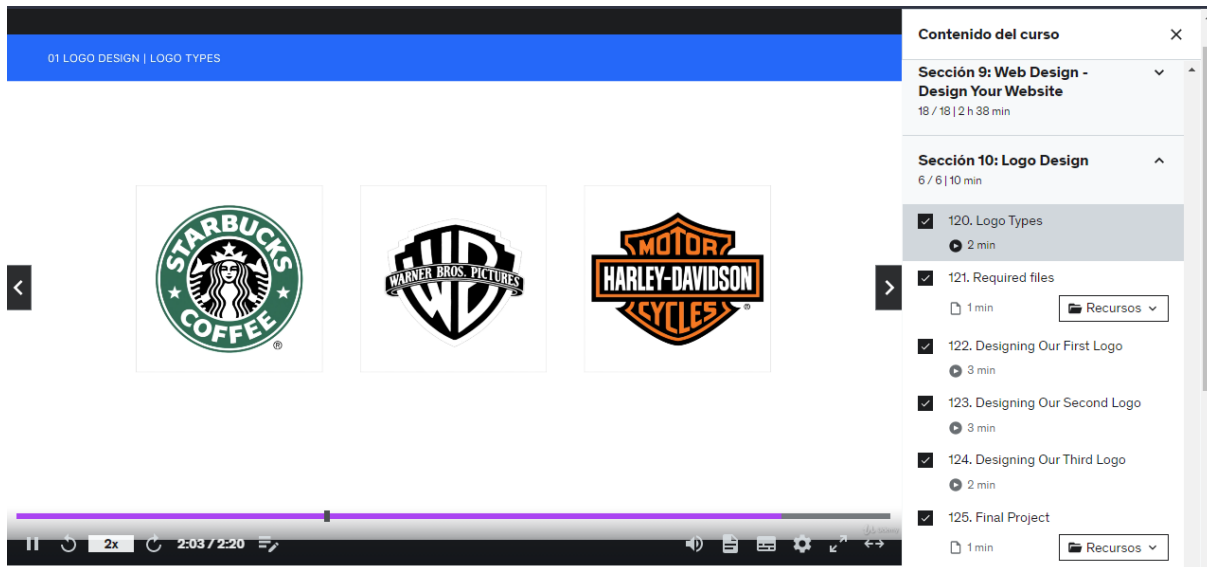
First some styles like text and color style and a wireframe to have an overview of the web page. This design have prototype to show how it works when some parts are clicked.



Section 10: Logo Design

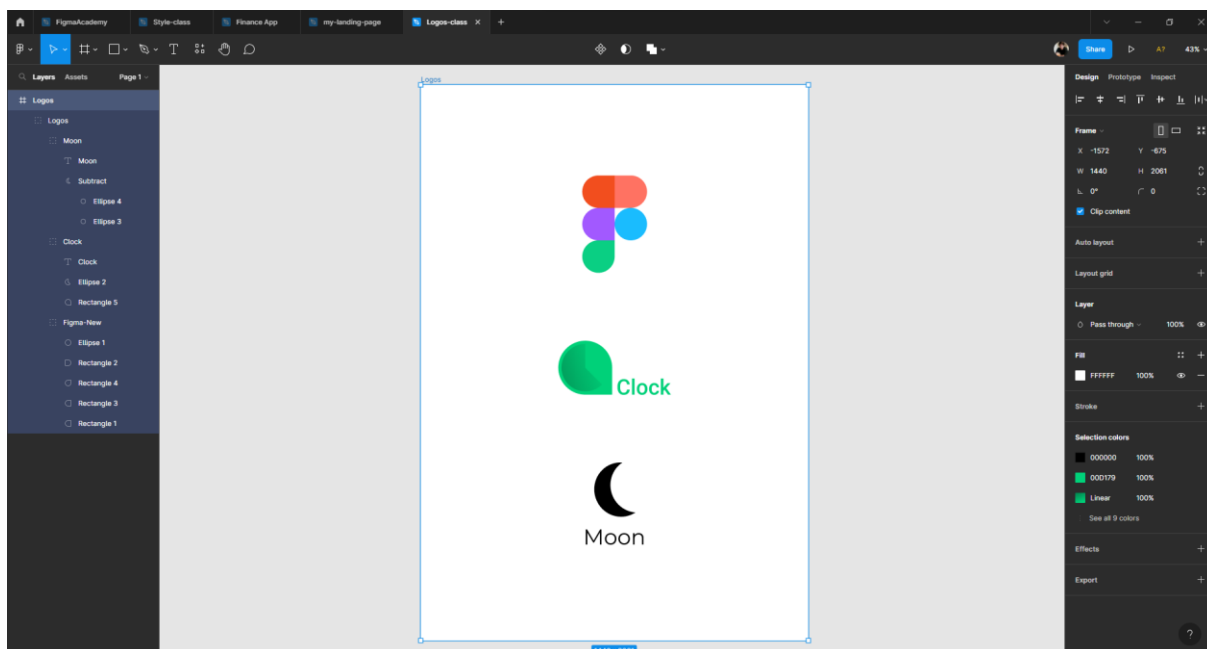
Introduction

First a class to talk about all the different kind of logos, like Monogram, Wordmarks, Abstracts, Pictorial Marks, Mascots, Combination Marks, and Emblems.



Result of the Logos

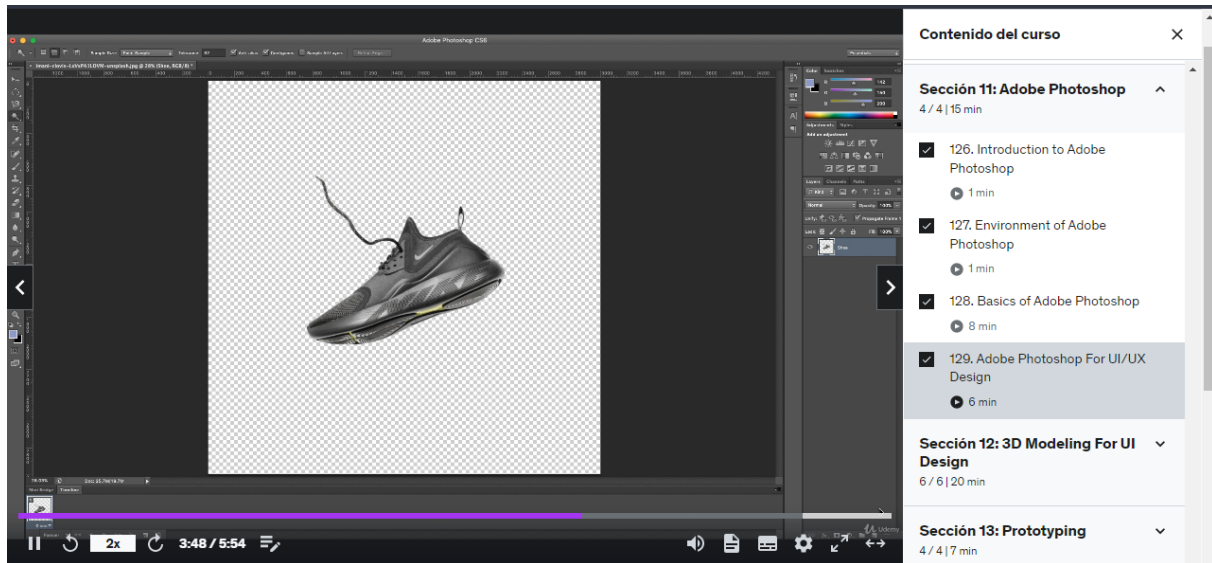
The first one is the logo from Figma itself and the others 2 are invented logos to use once more all the tools Figma has.



Section 11: Adobe Photoshop

Information about this section

This section is to show in a quick way how to use some tools of Adobe Photoshop that Figma still doesn't have, so to complement Figma. This section is to understand Adobe Photoshop interface and try some new basic things with it.



Contenido del curso

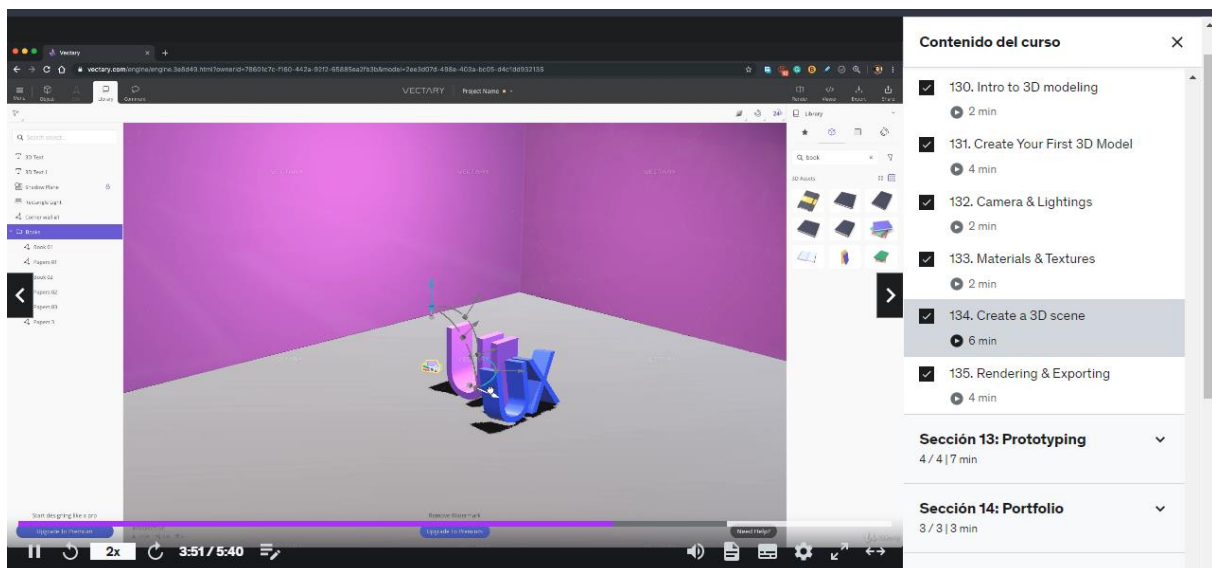
- Sección 11: Adobe Photoshop** 4 / 4 | 15 min
 - 126. Introduction to Adobe Photoshop 1 min
 - 127. Environment of Adobe Photoshop 1 min
 - 128. Basics of Adobe Photoshop 8 min
 - 129. Adobe Photoshop For UI/UX Design 6 min
- Sección 12: 3D Modeling For UI Design** 6 / 6 | 20 min
- Sección 13: Prototyping** 4 / 4 | 7 min

Section 12: 3D Modeling for UI Design

Information about this section

Have knowledge about 3D modelling is very useful to create amazing designs, and event show you own designs in mockups, for example even giving a better idea of how it will look from different point of views if it was in a phone.

For this section VECTARY is used, not need to be download since it is possible to use from the browser.



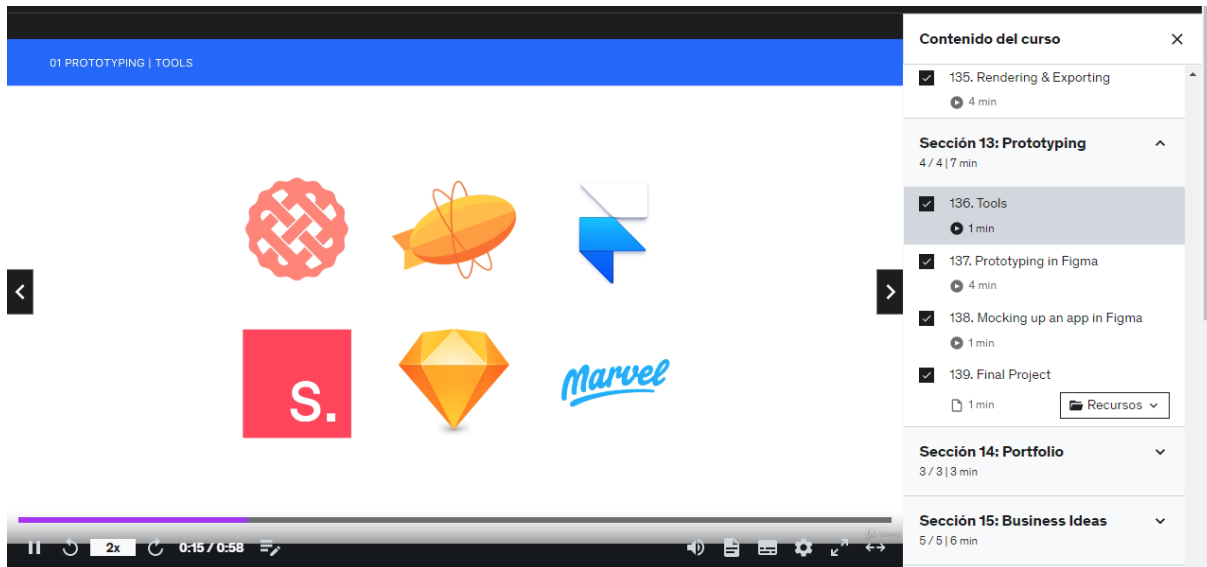
Contenido del curso

- 130. Intro to 3D modeling 2 min
 - 131. Create Your First 3D Model 4 min
 - 132. Camera & Lightings 2 min
 - 133. Materials & Textures 2 min
 - 134. Create a 3D scene 6 min
 - 135. Rendering & Exporting 4 min
- Sección 13: Prototyping** 4 / 4 | 7 min
- Sección 14: Portfolio** 3 / 3 | 3 min

Section 13: Prototyping

Information about this section

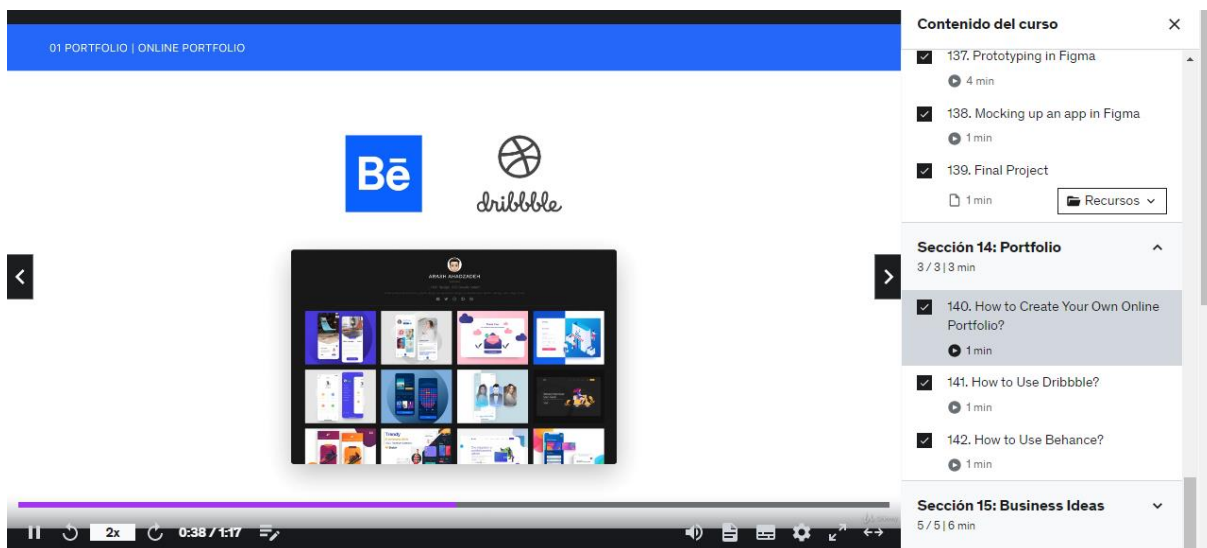
Figma is not the only program to create prototypes, for other kind of prototypes, we can say “fancy” prototypes, we can use ProtoPie, Zeplin, Invision Studio, Marvel, etc. But this apps are not free, so Figma is still the best option. In the next classes is add more prototype to the app created before and create a mockup for one screen.



Section 14: Portfolio

Information about this section

Getting information about places where you can share your designs to show them to the world and have a prove that you know how to make designs. For a portfolio it is possible to use websites for designers if you have not knowledge about web developing to create your own page.



Section 15: Business Ideas

Information about this section

How to get your first clients, necessary your portfolio and how do you like to work: for a company or as freelance. Remember managing your business can take a lot of time at the beginning more because all the regulations that you must learn at the beginning and recognize where your public is located to sell your designs. Communication is always the key with clients.

The screenshot shows a video player interface. The main content area displays a diagram titled "Starting Business" with a central lightbulb icon labeled "Idea". Five dashed lines radiate from the "Idea" icon to five surrounding icons: "Clients" (target), "Analysis" (bar chart), "Revenue" (piggy bank), "Legality" (scales), and "Analysis" (bar chart). The video player has a progress bar at the bottom showing 0:28 / 1:37 and a 2x speed setting. On the right, a sidebar titled "Contenido del curso" lists video topics, with "Sección 15: Business Ideas" expanded to show 5/5/6 min of content. The current video is "144. How to Start Your Own Business?" (2 min).

Section 16: Inspiration & Resources

Information about this section

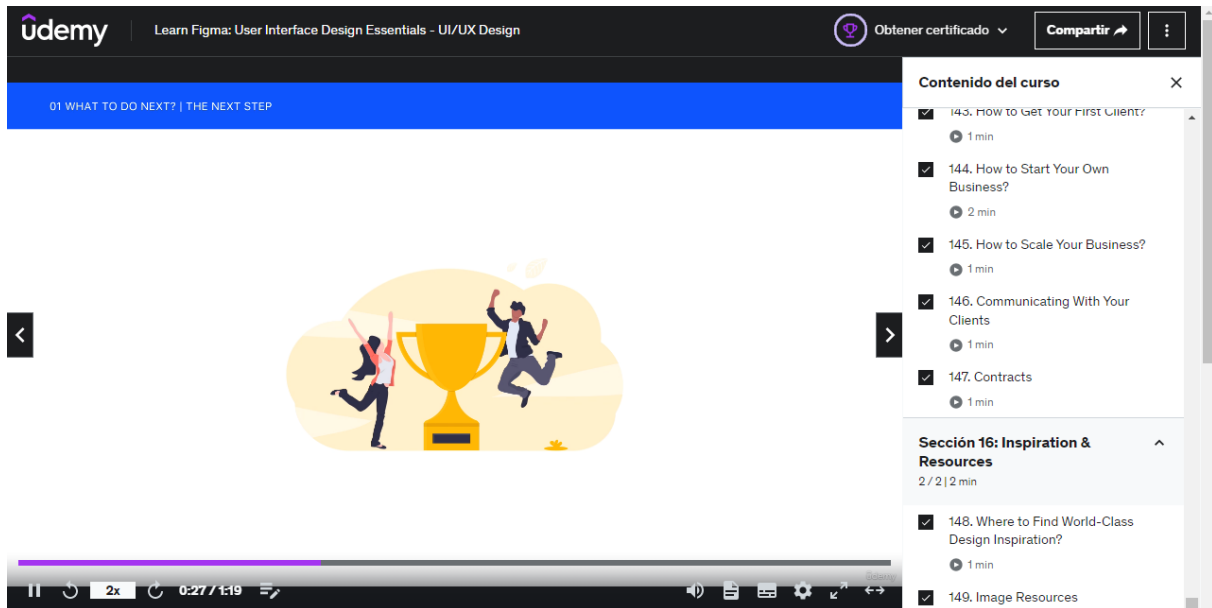
Remember always ask for permission if you want to use content that is created from someone else, there are a lot of websites with free content but some of them ask to mention the creator. You can also always buy content that you like, and you think is useful.

The screenshot shows a video player interface. The main content area displays a slide titled "Chapter 15 Inspiration & Resources" with the subtitle "World-class Design Inspiration & Resources". The slide features four website logos: Behance (www.behance.com), Dribbble (www.dribbble.com), Awwwards (www.awwwards.com), and Uplabs (www.uplabs.com). The video player has a progress bar at the bottom showing 0:04 / 0:48 and a 2x speed setting. On the right, a sidebar titled "Contenido del curso" lists video topics, with "Sección 16: Inspiration & Resources" expanded to show 2/2/2 min of content. The current video is "148. Where to Find World-Class Design Inspiration?" (1 min).

Section 17: What do Next

Information about this section

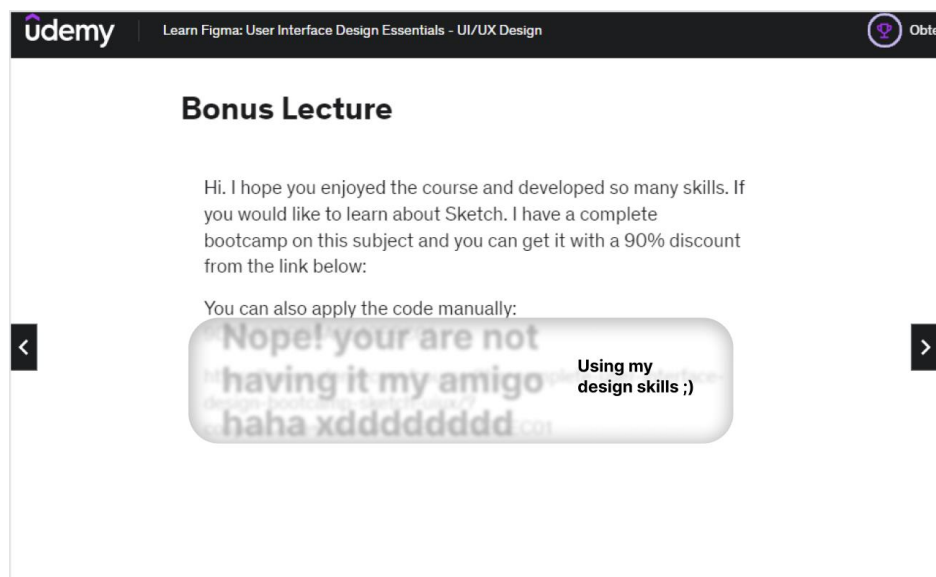
Practice is the key to become better in what you are doing, that is why it is so important to do something you like to do it a lot and do not get tired of it. But also remember, your designs should not be perfect so even is good to challenge yourself, try to not spend too much time in things that won't take you further.



Section 18: Bonus Lecture

Information about this section

Well, this is more just the goodbye and a discount for another course from the teacher.



Certificate from Learn Figma Course.

Screenshot from the Udemy website

The screenshot shows a Udemy certificate and a course card. The certificate is for the course "Learn Figma: User Interface Design Essentials - UI/UX Design" by Arash Ahadzadeh, awarded to David Silva Troya on February 13, 2023. The course card shows a 4.4-star rating, 10 hours of content, and a price of 11.99€ (discounted from 64.99€).

Udemy Categorías Udemy Business Enseña en Udemy Mi aprendizaje

Destinatario del certificado:
 David Silva Troya
Mechatronic Engineer | Applied Computer Science Student

Acerca del curso:

Learn Figma: User Interface Design Essentials - UI/UX Design
Arash Ahadzadeh
4,4 ★★★★★ (1.618)
10 horas en total · 151 clases
11,99 € ~~64,99 €~~

Actualiza tu certificado con tu nombre correcto o idioma preferido

El anterior certificado garantiza que [David Silva Troya](#) ha completado con éxito el curso [Learn Figma: User Interface Design Essentials - UI/UX Design](#) a fecha de 13/02/2023, habiendo sido impartido por [Arash Ahadzadeh](#) en Udemy. El certificado indica que se ha completado la totalidad del curso, según lo validado por el estudiante. La duración del curso representa el total de horas de vídeo del curso en el momento de finalización más reciente.

Link to see the certificate:

<http://ude.my/UC-e39fcdda-0cb4-43cf-b8e5-8a065a82eb92>

Flutter Artificial Intelligence Course – Build 15+ AI Apps

Flutter is a framework that use Dart as program language, this was created by Google and allow us to create apps for Android and iOS, it is faster than React-Native since it transforms the Dart code into the main code of the Operational System. Plus, Flutter can also be used to create websites. Using Artificial Intelligence in apps is the main topic now days.

This course has **9.5 hours** in total.

The screenshot shows the course page on Udeemy. At the top, there's a search bar and navigation links. The course title is 'Flutter Artificial Intelligence Course - Build 15+ AI Apps'. Below the title, it says 'Learn Flutter 2.0 Android & iOS Machine Learning & Deep Learning with TensorFlow Lite & Make 15+ Apps - Complete Guide'. The course has a rating of 3.5 stars from 98 reviews and 1,161 students. It was created by Coding_Cafe and last updated in 12/2021. The course is available in English and Spanish. On the right, there's a preview video player and a purchase button. Below the purchase button, there's a guarantee of 30 days and lifetime access. There are also links to share, gift the course, and apply a coupon. At the bottom right, there's a section for '¿La formación es para 5 o más personas?' with a 'Prueba Udeemy Business' button.

Lo que aprenderás

- ✓ Flutter Deep Learning
- ✓ Flutter Artificial Intelligence
- ✓ Implementing (NLP) Natural Language Processing Algorithm for Mobile Apps Development
- ✓ Optical Character Recognition
- ✓ you will learn and make 15+ AI Apps
- ✓ Flutter Machine Learning
- ✓ Skills and Techniques to develop any Artificial Intelligence idea into a mobile phone app
- ✓ Implementing (CNN) Convolutional Neural Network for Mobile Apps Development
- ✓ Understanding of Different Types of Neural Networks & How you can use them
- ✓ and Much more.

Section 1: Introduction

Welcome to the course

Explanation of the frameworks to be used like Flutter and TensorFlow. Showing all the projects that we are going to create and giving a brief explanation from them.

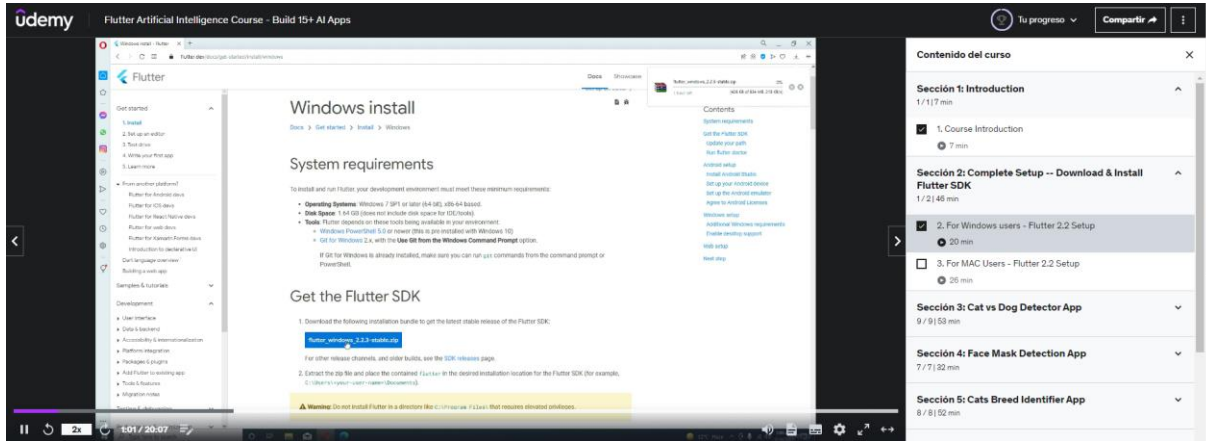
The screenshot shows the video player interface for the course. The video is titled 'Flutter Artificial Intelligence Course - Build 15+ AI Apps'. The video content shows a futuristic scene with a robot, a globe, and various AI-related icons. On the right side, there's a 'Contenido del curso' (Course Content) sidebar. The sidebar lists the following sections:

- 1. Course Introduction (7 min)
- Sección 2: Complete Setup -- Download & Install Flutter SDK (1/2/46 min)
- Sección 3: Cat vs Dog Detector App (9/9/53 min)
- Sección 4: Face Mask Detection App (7/7/32 min)
- Sección 5: Cats Breed Identifier App (8/8/52 min)
- Sección 6: Flower Types Identifier App (4/5/15 min)
- Sección 7: Avengers Characters Recogniser App (6/5/20 min)
- Sección 8: Image Captions Generator App - ((NLP) Natural Language Processing Algorithm) (12/12/16 min)

Section 2: Complete Setup – Download & Install Flutter SDK

Flutter for Windows

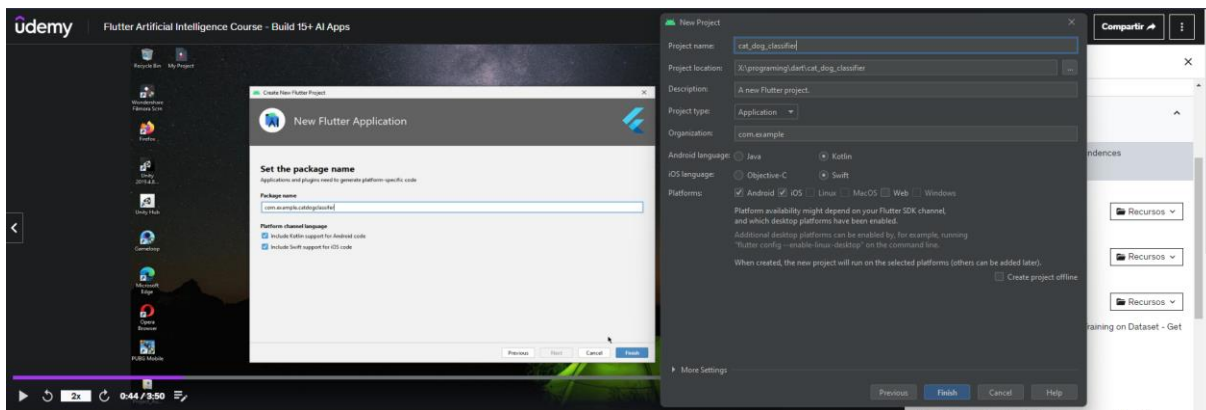
Installing all the necessary programs, frameworks, and plugins. I only saw the windows part since I have no MAC.



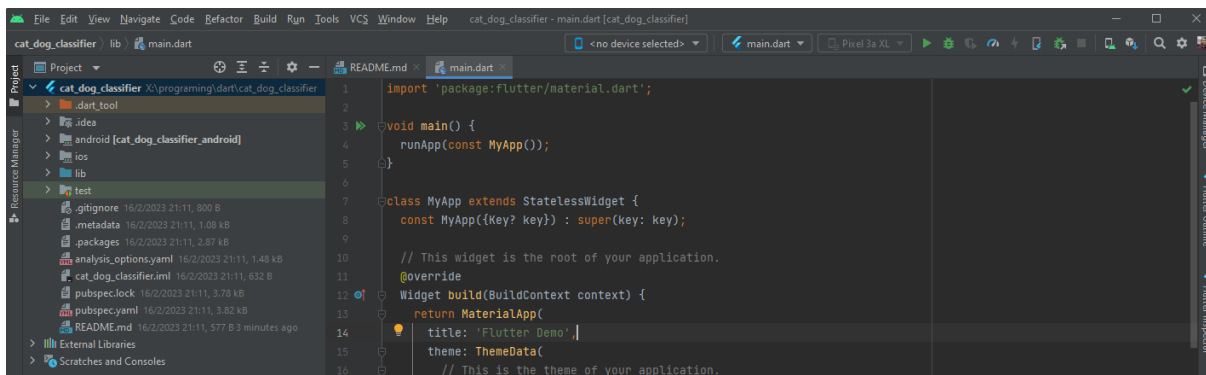
Section 3: Cat vs Dog Detector App

Creating Project and Installing Dependencies

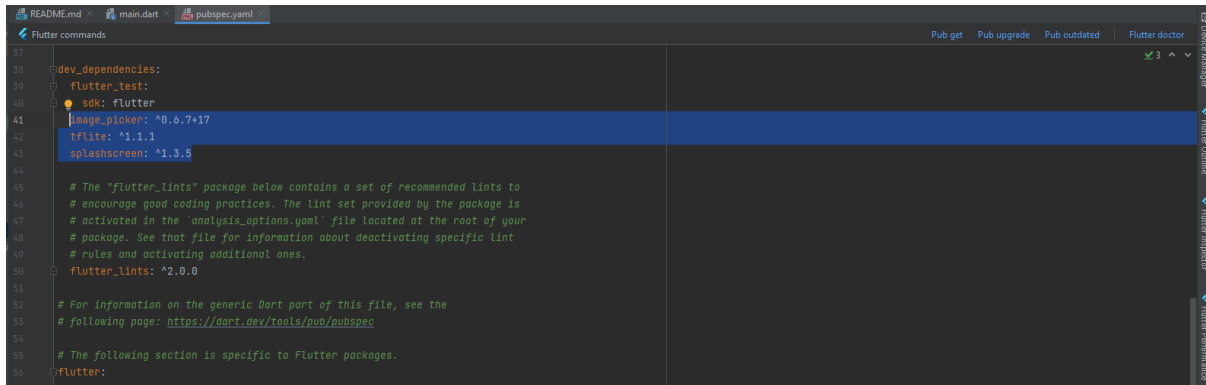
First, we open **Android Studio** to create the Flutter Project. Actually this can be done also from Visual Studio Code and I decided to work there after create the Project.



The main part now is to edit everything inside the folder "lib". We start with the **main.dart** file.

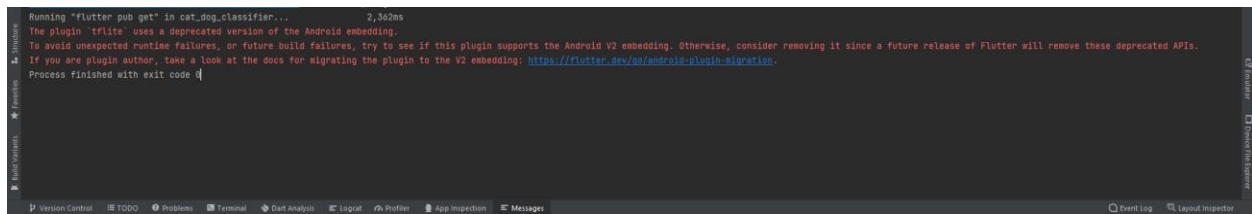


For the dependencies we must edit the *pubspec.yaml* file, like in the next screenshot.



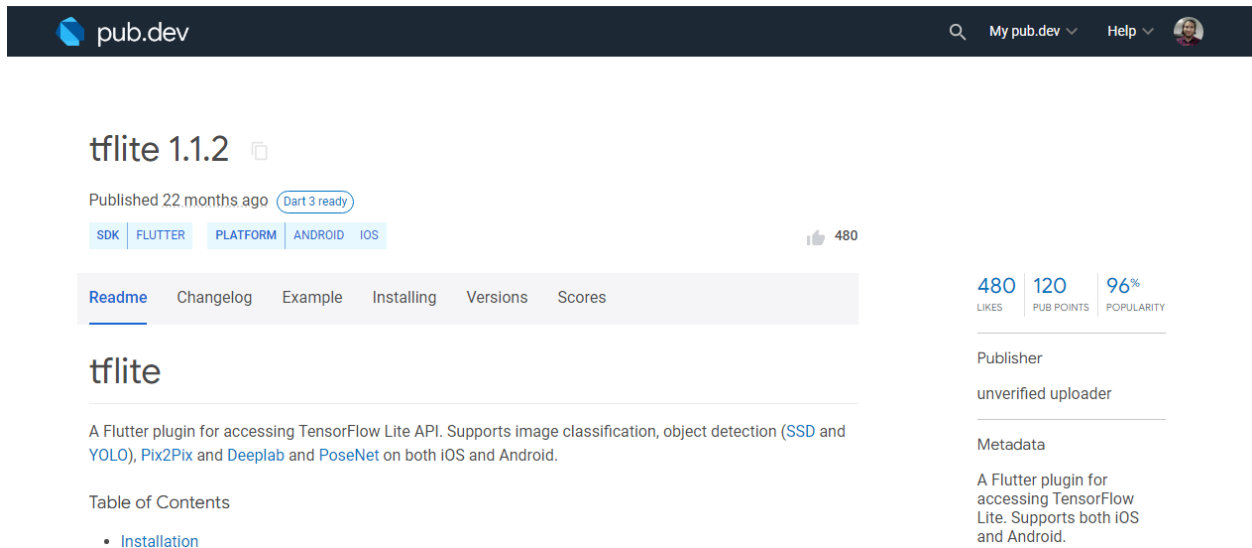
```
dev_dependencies:  
  flutter_test:  
    sdk: flutter  
  image_picker: ^0.6.7+17  
  tflite: ^1.1.1  
  splashscreen: ^1.3.5  
  
# The "flutter_lints" package below contains a set of recommended lints to  
# encourage good coding practices. The lint set provided by the package is  
# activated in the analysis_options.yaml file located at the root of your  
# package. See that file for information about deactivating specific lint  
# rules and activating additional ones.  
flutter_lints: ^2.0.0  
  
# For information on the generic Dart part of this file, see the  
# following page: https://dart.dev/tools/pub/pubspec  
  
# The following section is specific to Flutter packages.  
flutter:
```

And like every time programming, we get an error. The error is related to the library tflite that hasn't been updated with the last dart version.



```
Running "flutter pub get" in cat_dog_classifier... 2,302ms  
The plugin "tflite" uses a deprecated version of the Android embedding.  
To avoid unexpected runtime failures, or future build failures, try to see if this plugin supports the Android V2 embedding. Otherwise, consider removing it since a future release of Flutter will remove these deprecated APIs.  
If you are plugin author, take a look at the docs for migrating the plugin to the V2 embedding: https://flutter.dev/go/android-plugin-migration.  
Process finished with exit code 0
```

We can see in the libraries from the community that flutter has, the tflite library hasn't been updated in the last 22 months.



pub.dev

tflite 1.1.2

Published 22 months ago Dart 3 ready

SDK FLUTTER PLATFORM ANDROID IOS 480

Readme Changelog Example Installing Versions Scores

tflite

A Flutter plugin for accessing TensorFlow Lite API. Supports image classification, object detection (SSD and YOLO), Pix2Pix and Deeplab and PoseNet on both iOS and Android.

Table of Contents

- Installation

480 LIKES | 120 PUB POINTS | 96% POPULARITY

Publisher: unverified uploader

Metadata: A Flutter plugin for accessing TensorFlow Lite. Supports both iOS and Android.

The solution is then looking for a new library that the community has to replace that forgotten one, the problem is that Flutter never delete the libraries created by someone that were verified in that moment, to can be sure every app that is using it does not crash. But the problem is when the creator does not give maintenance to the library like in this moment.

Luckily the community is big and there are already some options to replace the tflite library, we can just hope the functions does not change as much as the name of the library does.

tensorflow 10 110 54%
LIKES PUB POINTS POPULARITY

TensorFlow Lite Flutter plugin provides an easy, flexible, and fast Dart API to integrate TFLite models in flutter apps across mobile and desktop platforms.

v 0.9.1 (4 months ago) MIT Dart 3 ready

SDK | FLUTTER | PLATFORM | ANDROID | IOS

API result: [tflite_flutter/tflite_flutter-library.html](#)

flutter_tflite 19 110 91%
LIKES PUB POINTS POPULARITY

A Flutter plugin for accessing TensorFlow Lite. Supports both iOS and Android.

v 1.0.1 (4 months ago) MIT Dart 3 ready

SDK | FLUTTER | PLATFORM | ANDROID | IOS

API results: [flutter_tflite/flutter_tflite-library.html](#)

tflite_dart 0 120 24%
LIKES PUB POINTS POPULARITY

A library for interact with tensorflow lite on cross platform.

v 0.0.0 (5 months ago) MIT Dart 3 ready

SDK | DART | FLUTTER | PLATFORM | ANDROID | IOS | LINUX | MACOS | WINDOWS

API result: [tflite_dart/tflite_dart-library.html](#)

Now we can try latter on which one is the best option to use. And with no surprises we get a new error now with the other dependency.

```

Console
Resolving dependencies...
The current Dart SDK version is 3.0.0-244.0.dev.

Because splashscreen 1.3.5 doesn't support null safety and no versions of splashscreen match >1.3.5 <2.0.0, splashscreen ^1.3.5 is forbidden.
So, because cat_dog_classifier depends on splashscreen ^1.3.5, version solving failed.

The lower bound of "sdk: '>=2.0.0-dev.68.0 <3.0.0'" must be 2.12.0 or higher to enable null safety.
For details, see https://dart.dev/null-safety

```

Once again, this is solve using another library that works in the same way. It is the second option we get if we search for splashscreen. And we can see the difference in the last time that each of them were update.

splashscreen 508 110 98%
LIKES PUB POINTS POPULARITY

A splashscreen package created as intro for any flutter application easily with a lot of customization

v 1.3.5 (2 years ago) dplyr.dev MIT

SDK | FLUTTER | PLATFORM | ANDROID | IOS | LINUX | MACOS | WEB | WINDOWS

API results: [splashscreen/splashscreen-library.html](#)

easy_splash_screen 37 140 95%
LIKES PUB POINTS POPULARITY

Easy Splash Screen plugin for your flutter app. You can easily implement this plugin to show splash screen and save time.

v 1.0.4 (6 months ago) sujanainju.com.np MIT Dart 3 ready

SDK | FLUTTER | PLATFORM | ANDROID | IOS | LINUX | MACOS | WEB | WINDOWS

And now the last error, this library actually got maintenance, so we only need to write the new version.

```
C:\Users\david\AppData\Local\flutter\bin\flutter.bat --no-color pub get
Resolving dependencies...
The current Dart SDK version is 3.0.0-244.0.dev.

Because cat_dog_classifier depends on image_picker >=0.8.2 <0.7.0-nullsafety which doesn't support null safety, version solving failed.

The lower bound of "sdk: '>=1.8.0 <2.0.0 or >=2.0.0-dev.28.0 <3.0.0'" must be 2.12.0 or higher to enable null safety.
For details, see https://dart.dev/null-safety
Process finished with exit code 1
```

At the end all the dependencies are not giving error anymore and they should work as the previous one were working, the documentation was similar and for tflite even the same but now fixing the problem that the other had.

```
cat_dog_classifier > pubspec.yaml
36 cupertino_icons: ^1.0.2
37
38 dev_dependencies:
39 flutter_test:
40   sdk: flutter
41 # tflite: ^1.1.1
42 flutter_tflite: ^1.0.1
43 # splashscreen: ^1.3.5
44 easy_splash_screen: ^1.0.4
45 # image_picker: ^0.6.7+17
46 image_picker: ^0.8.6+1

Document 1/1
Messages: [cat_dog_classifier] Flutter x
C:\Users\david\AppData\Local\flutter\bin\flutter.bat --no-color pub get
Resolving dependencies...
image 3.3.0 (4.0.15 available)
Got dependencies!
Process finished with exit code 0
```

I have to say, this was not cover in the classes. I had to search for these new libraries.

Adding Splash Screen

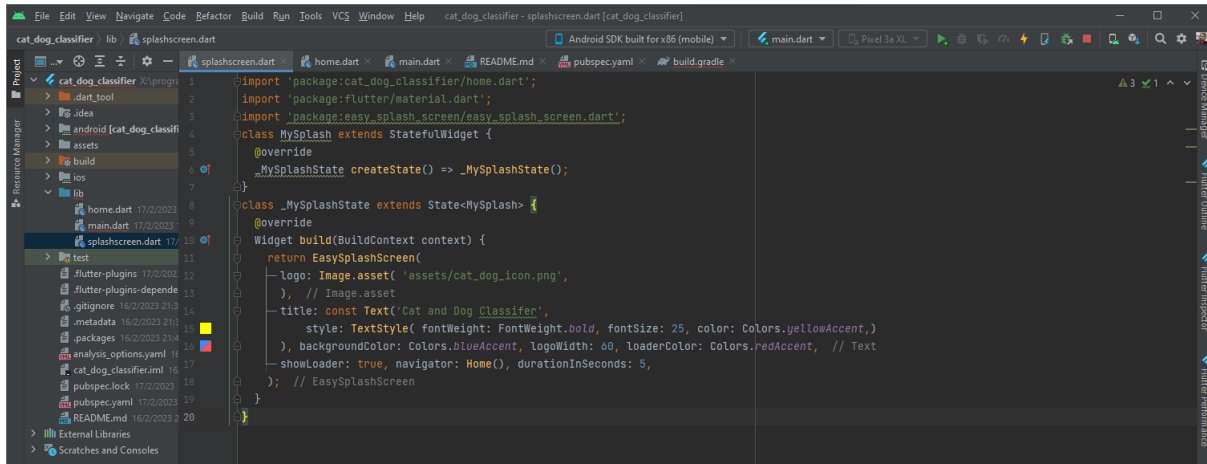
We will need to create 2 new files, for the home screen and the splash screen. First the home screen.

```
cat_dog_classifier lib home.dart
import 'package:flutter/material.dart';

class Home extends StatefulWidget {
  @override
  _HomeState createState() => _HomeState();
}

class _HomeState extends State<Home> {
  @override
  Widget build(BuildContext context) {
    return const Scaffold(backgroundColor: Colors.blueAccent,
      body: Text('Hola mundo desde home screen!')
    ); // Scaffold
  }
}
```

And the splash screen, this code looks like this just to save space in this screenshot. Normally you can have a lot more space and separations.

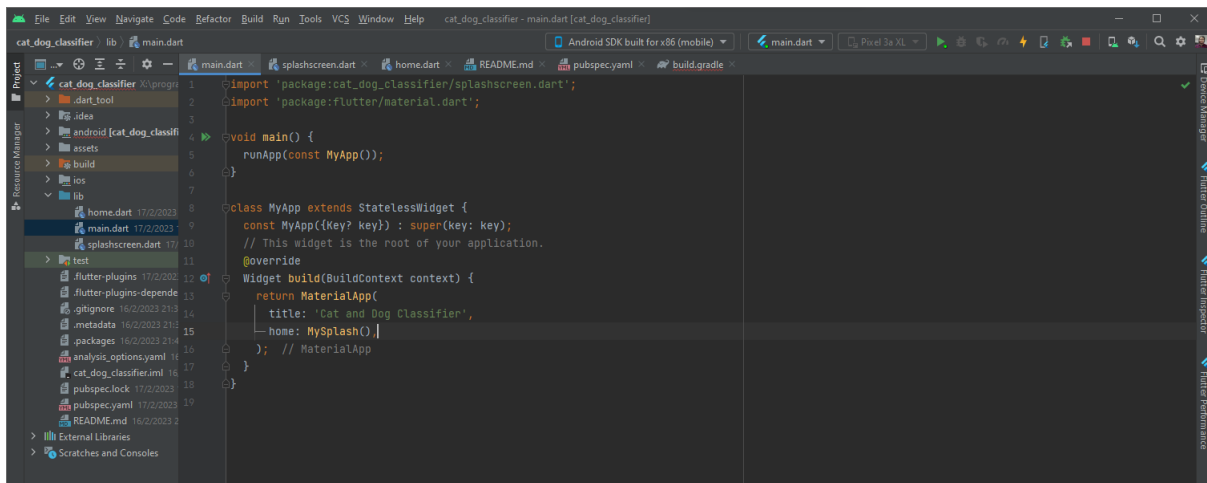


```
import 'package:cat_dog_classifier/home.dart';
import 'package:flutter/material.dart';
import 'package:easy_splash_screen/easy_splash_screen.dart';

class MySplash extends StatefulWidget {
  @override
  _MySplashState createState() => _MySplashState();
}

class _MySplashState extends State<MySplash> {
  @override
  Widget build(BuildContext context) {
    return EasySplashScreen(
      logo: Image.asset('assets/cat_dog_icon.png',
        ), // Image.asset
      title: const Text('Cat and Dog Classifier',
        style: TextStyle(fontWeight: FontWeight.bold, fontSize: 25, color: Colors.yellowAccent),
      ), backgroundColor: Colors.blueAccent, logoWidth: 60, loaderColor: Colors.redAccent, // Text
      showLoader: true, navigator: Home(), durationInSeconds: 5,
    ); // EasySplashScreen
  }
}
```

To be able to use the code we just created we need to change the **main.dart** file.

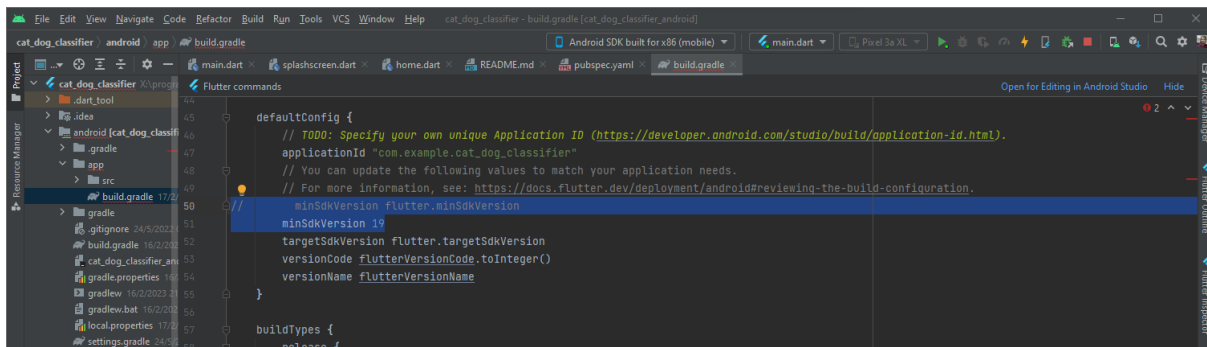


```
import 'package:cat_dog_classifier/splashscreen.dart';
import 'package:flutter/material.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key);
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Cat and Dog Classifier',
      home: MySplash(),
    ); // MaterialApp
  }
}
```

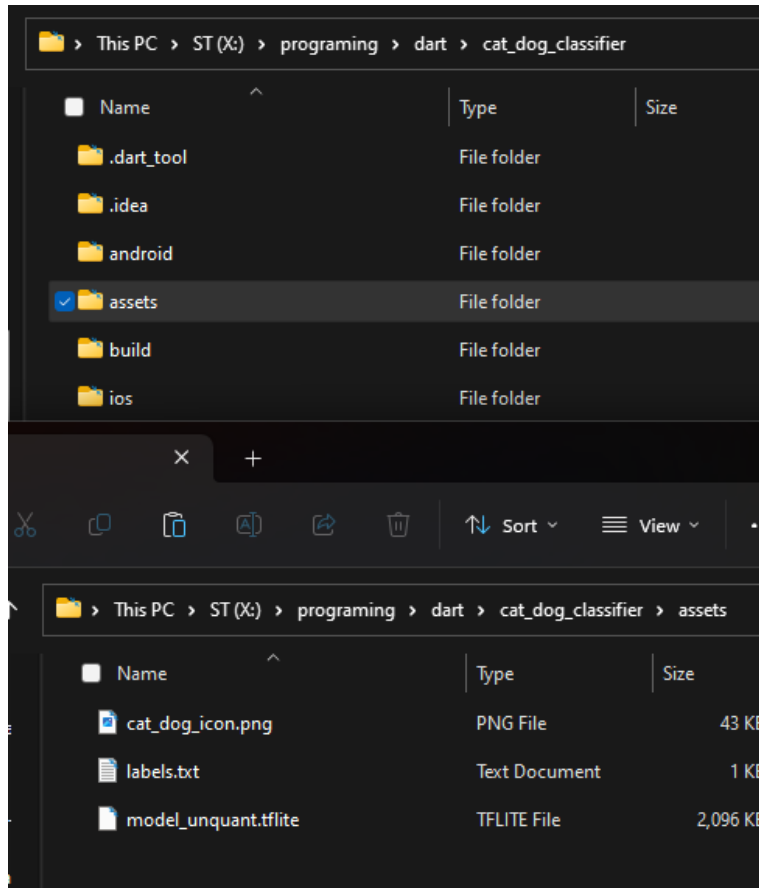
And last detail before to run the code is edit the **build.gradle** file from Android.



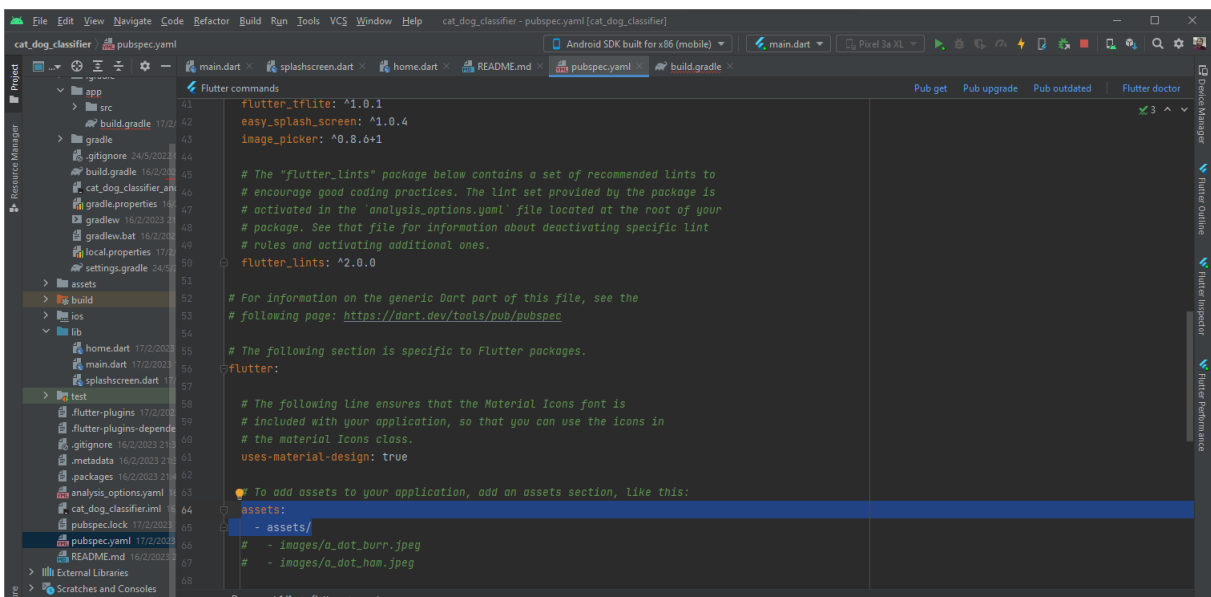
```
defaultConfig {
  // TODO: Specify your own unique Application ID (https://developer.android.com/studio/build/application-id.html).
  applicationId "com.example.cat_dog_classifier"
  // You can update the following values to match your application needs.
  // For more information, see: https://docs.flutter.dev/deployment/android#reviewing-the-build-configuration.
  minSdkVersion flutter.minSdkVersion
  minSdkVersion 19
  targetSdkVersion Flutter.targetSdkVersion
  versionCode flutterVersionCode.toInteger()
  versionName flutterVersionName
}

buildTypes {
  release {
```

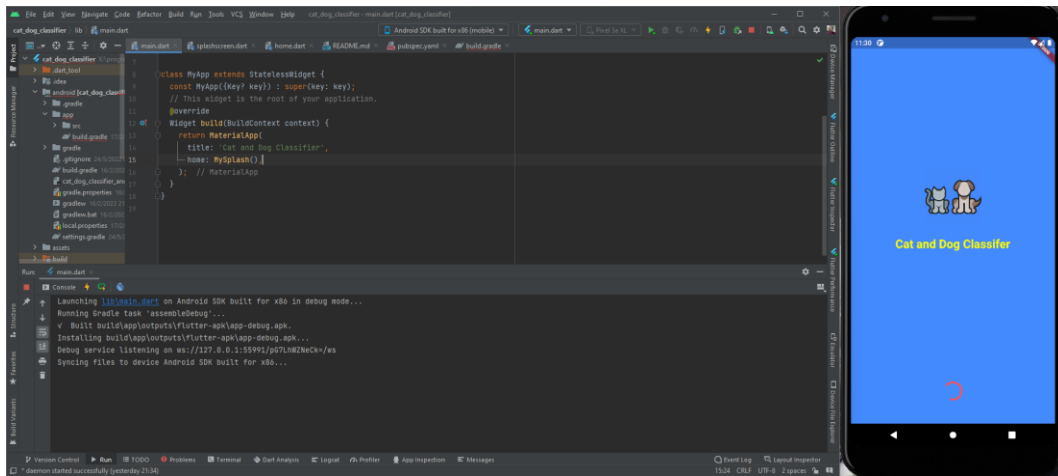
But we are making use from some assets and for that we need make some other modifications. For this we must create a new folder called **assets** and there put there all the images and other files we want to use. In this case I also added the labels and the model.



And now that it is created, we specify in the **pubspec.yaml** that we are going to use all inside the folder assets.

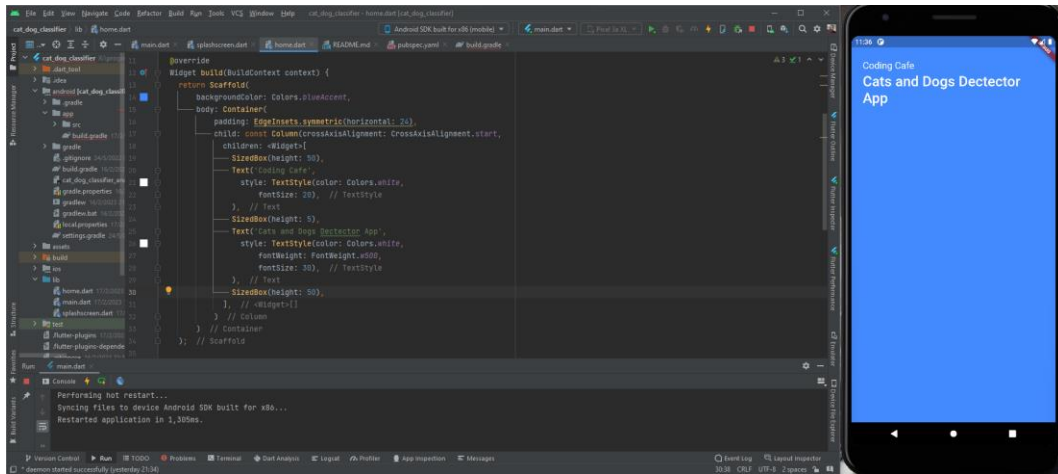


And finally, we can start our android device to then run the program.



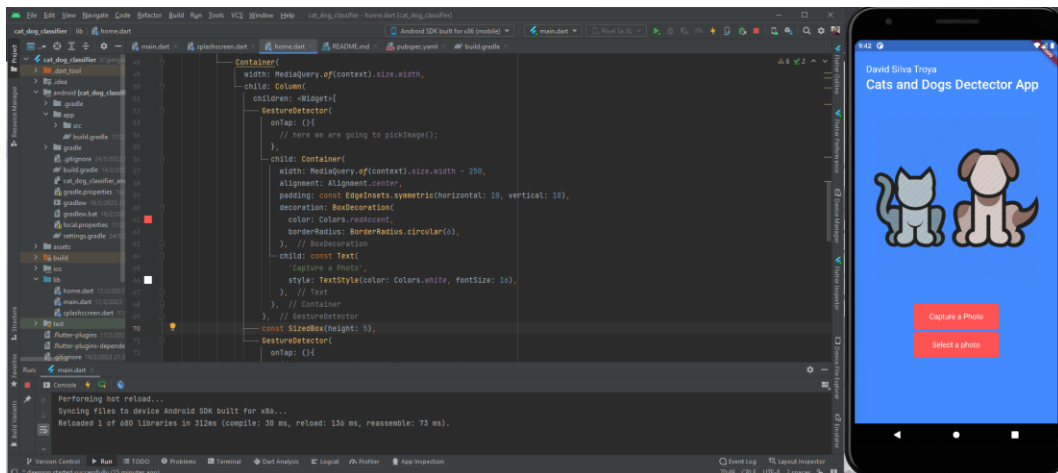
Creating Home Page

In this part we just edit the **home.dart** file that we created before.



Home Page Design – Complete

Now we must add the buttons for capturing a photo and also another to select a picture from the gallery of the phone.

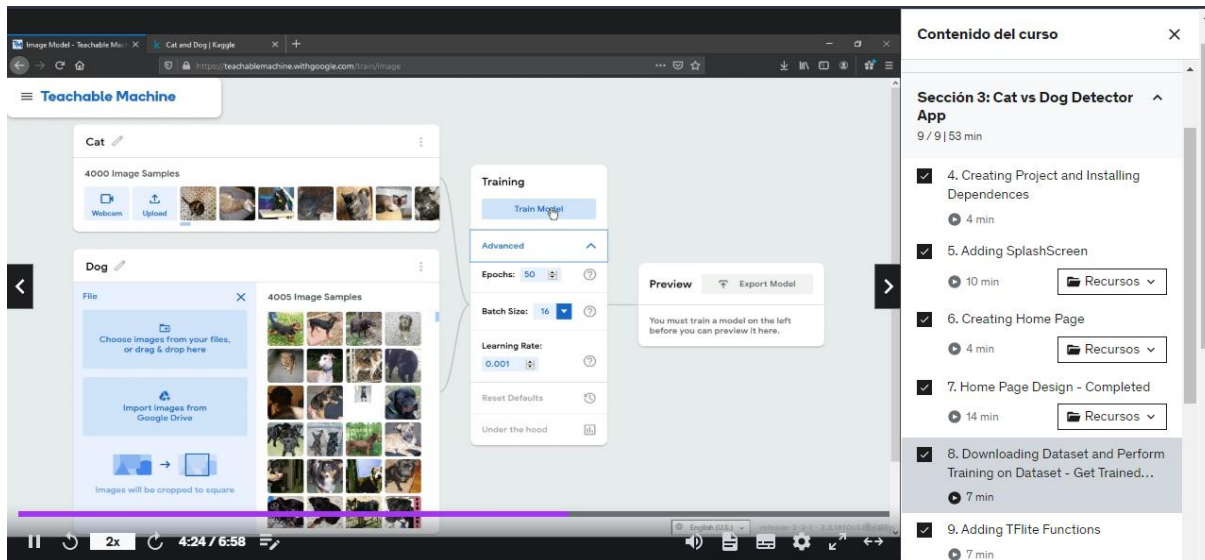


Downloading Dataset and Perform Training on Dataset – Get Trained Model

This part is downloading the dataset from Kaggle and then training with Google teachable machine.

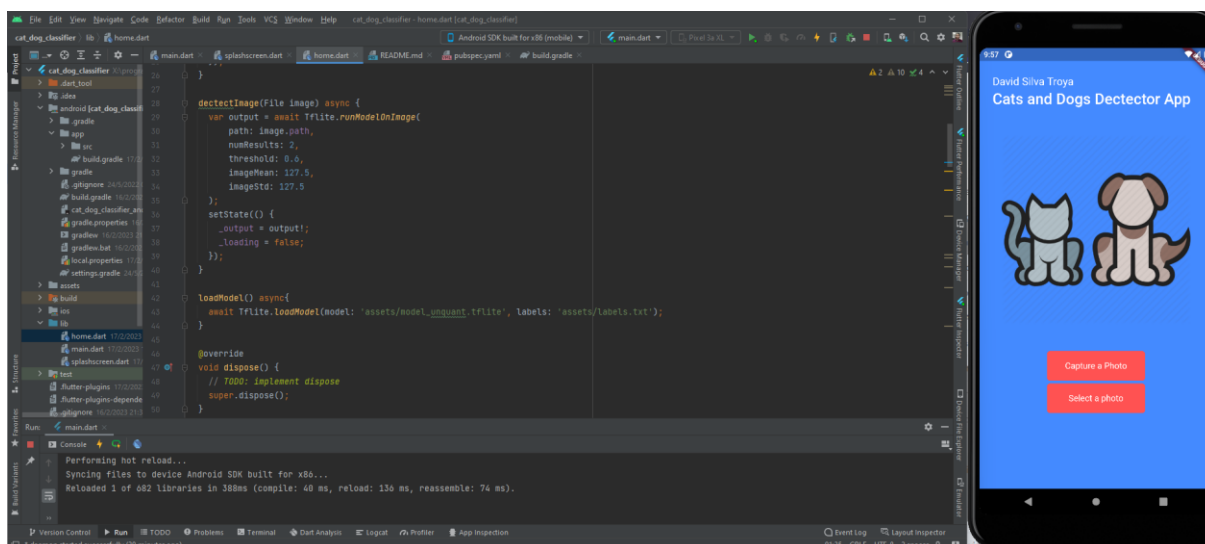
Kaggle link: <https://www.kaggle.com/datasets/tongpython/cat-and-dog>

Google Teachable Machine: <https://teachablemachine.withgoogle.com/>



Adding TFlite Functions

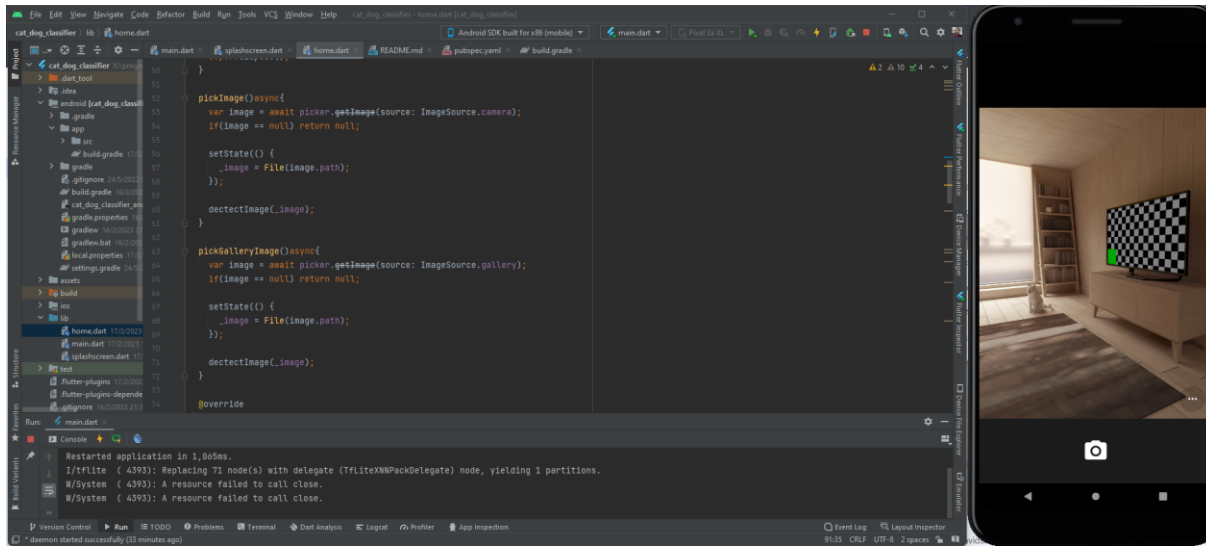
Ok, here we add quite too much code for one screenshot but at least I can show how the model part looks like.



Creating Functions for Capturing Image and Pick Image from Gallery

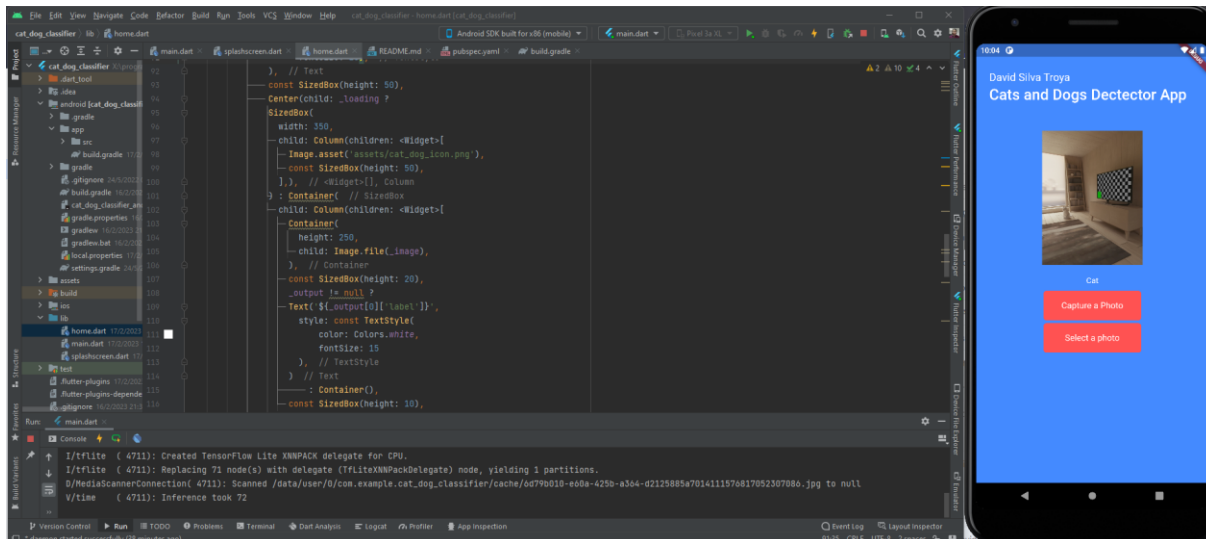
I have to mention here that when I tried to use the camara in the emulator phone I was thinking I will see the webcam but actually it gives a kind of Virtual Reality space.

Now the functions to use the camera and see the gallery are working.



Completing App and Texting the App

Now we finish the code by adding the function to showing the picture with the label in text.

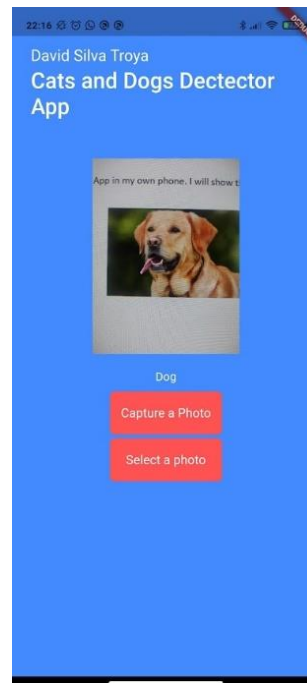


Completed Project

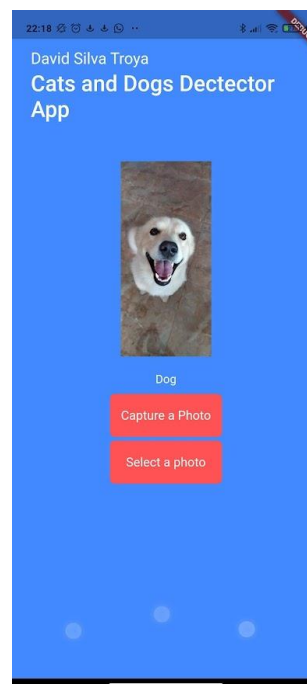
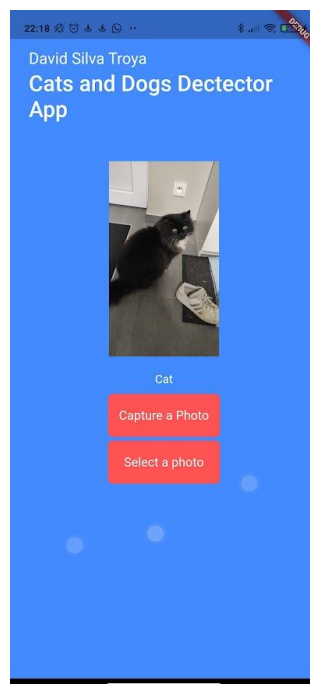
And the last part is showing some examples with the App in my own phone. I will show the examples here and take a photo of them.



Now the results of **taking the picture.**



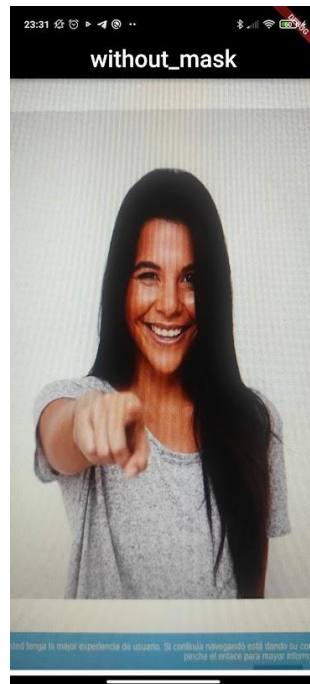
And the result of using **the Gallery.** (The 3 white dots are my fingers taking a screenshot)



Section 4: Face Mask Detection App

Completed Project

The same procedure as the previous project but now with a live camera library. Here some examples when people are not using masks.



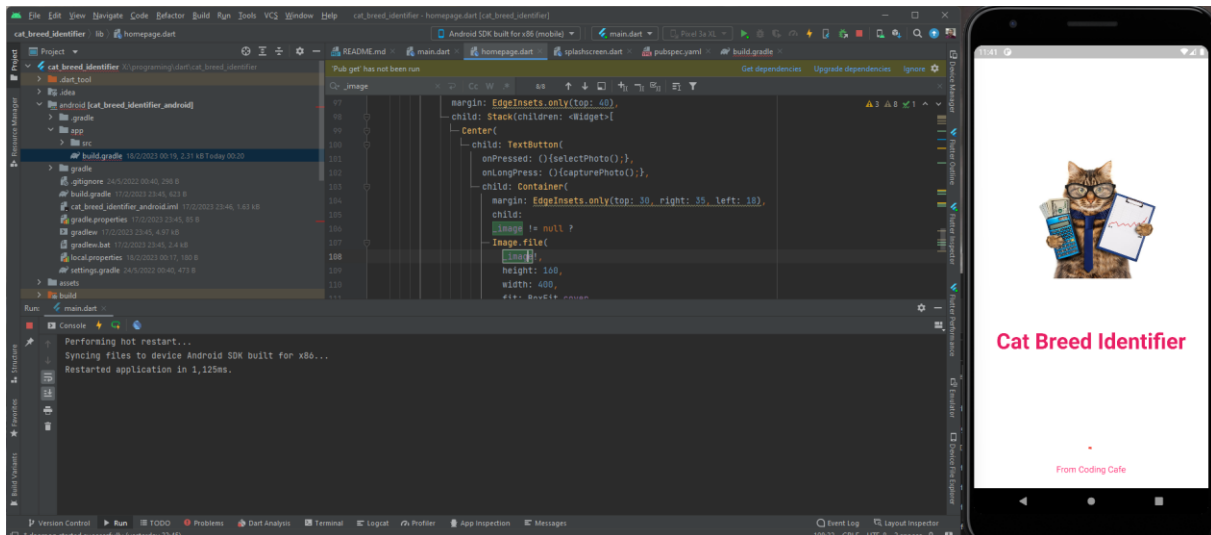
And some other examples with people using masks, but the model has problems recognizing more than one person with a mask.



Section 5: Cats Breed Identifier App

Completed Project

After fixing some error with some null variables and late initialization the app is finally working.



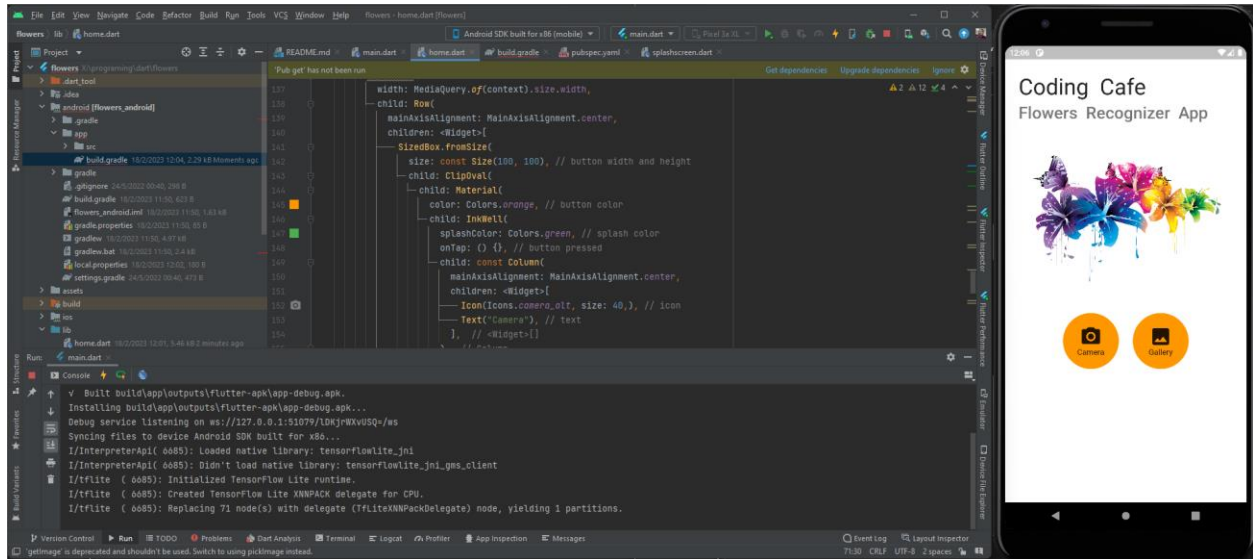
And here an example of how it works taking images from the gallery. The number at the beginning is just the position of the label.



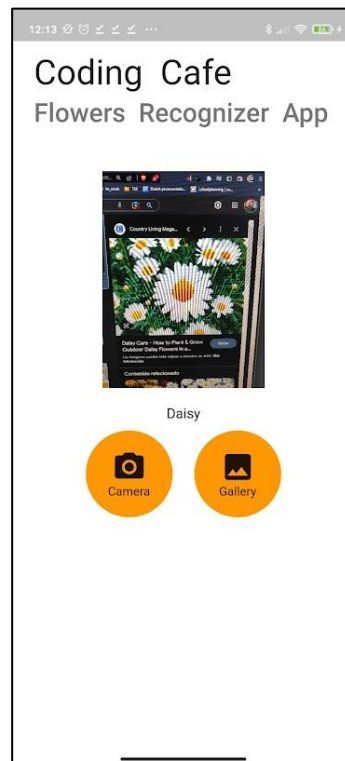
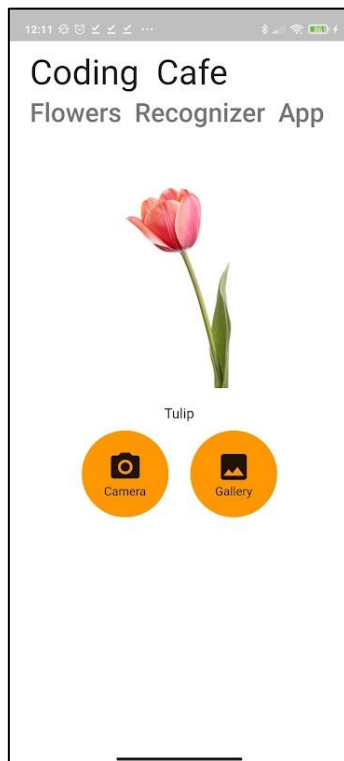
Section 6: Flower types Identifier App

Completed Project

Like usual just checking and modifying some libraries, but all working fine.



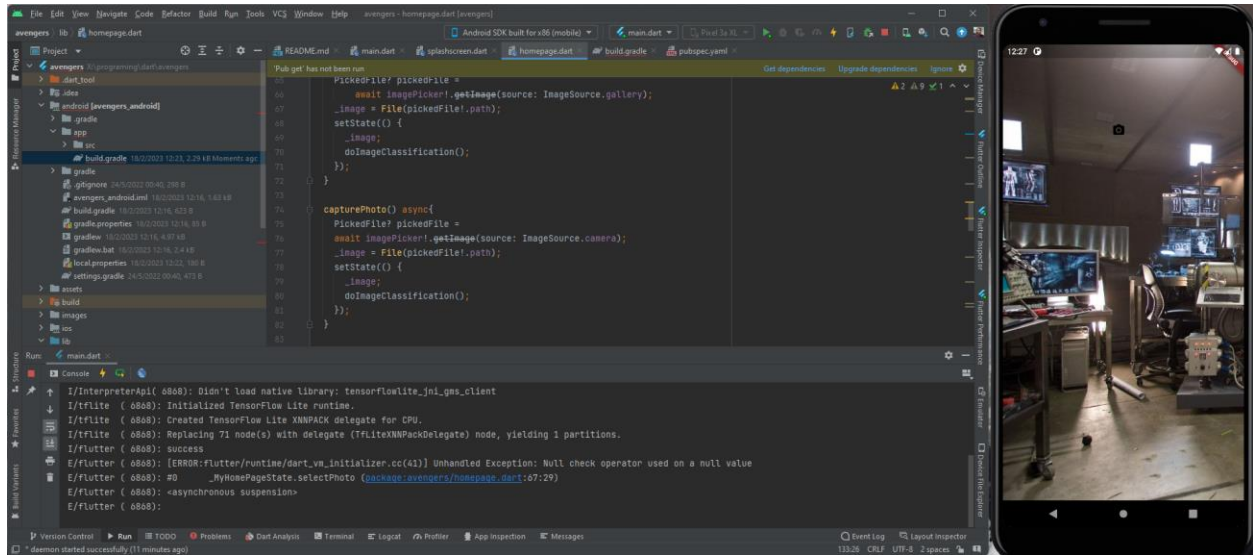
And the example using the Gallery and taking a picture.



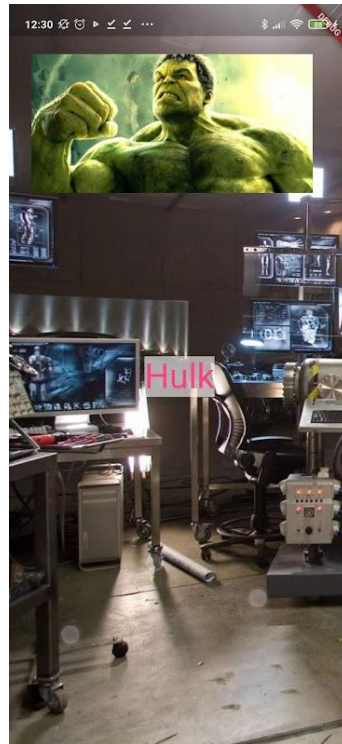
Section 7: Avengers Characters Recognizer App

Completed Project

Updating libraries and running.

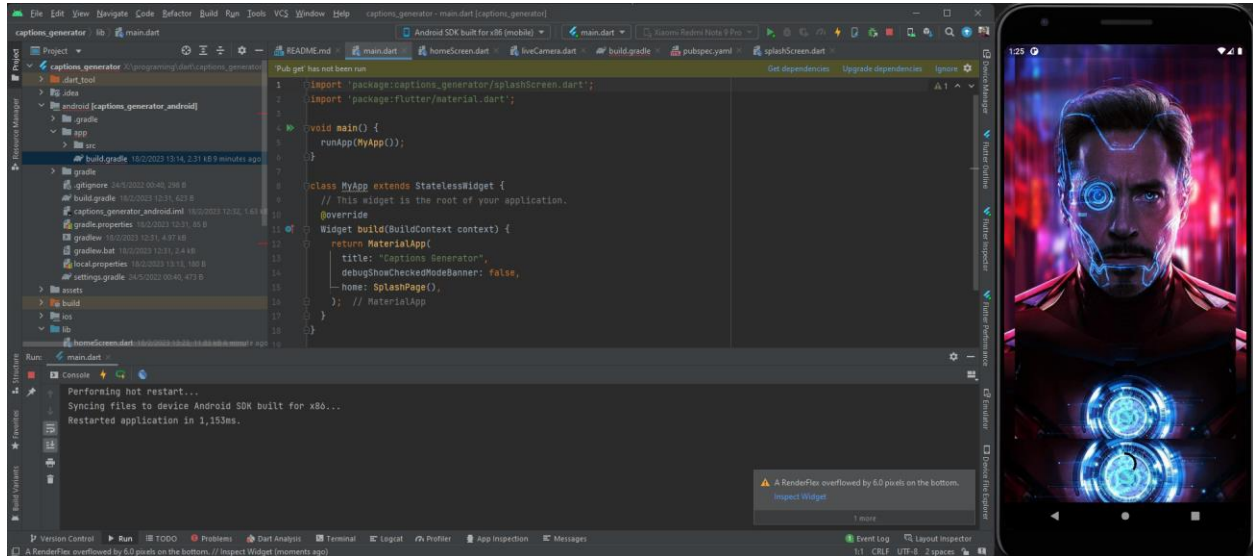


Example of detecting the Avenger.

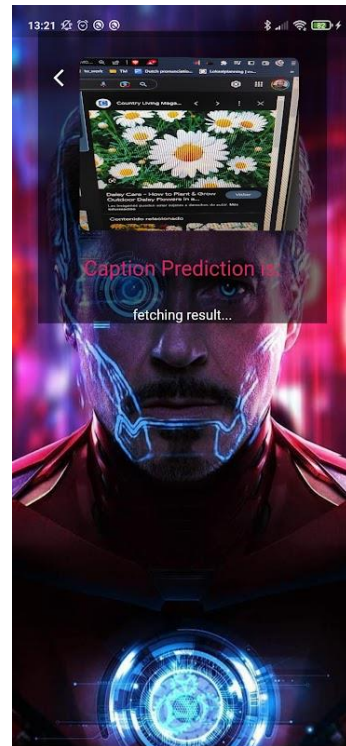
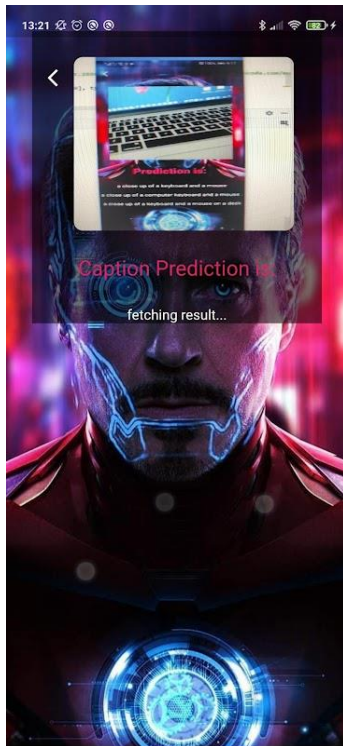


Section 8: Image Caption Generator App

Completed Project



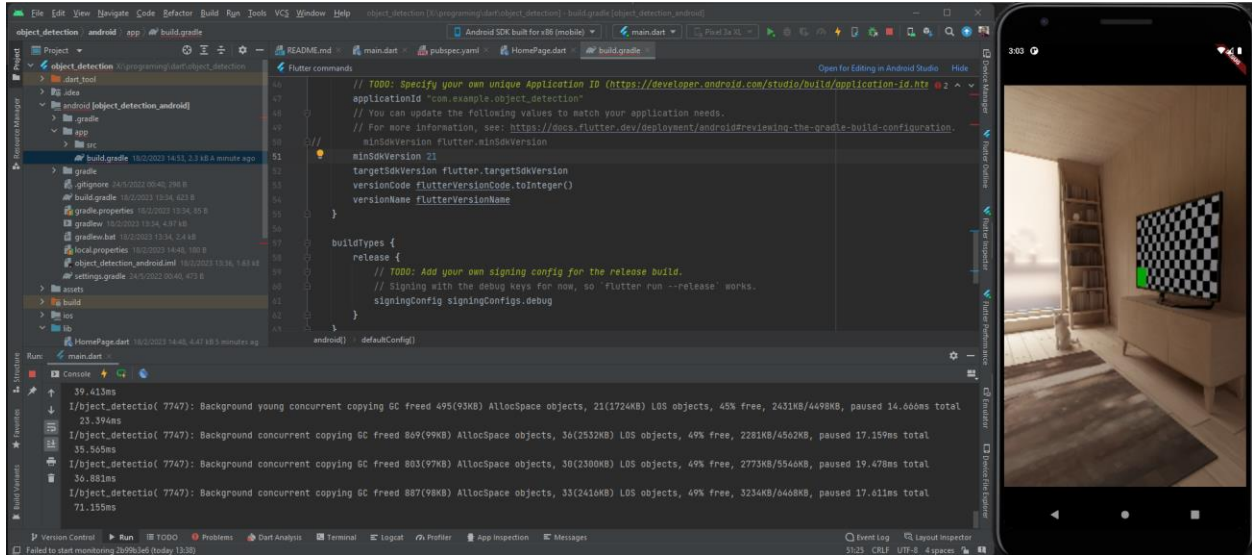
This App use an API and more libraries, with the new versions some things changed and now it is not getting the result of the caption.



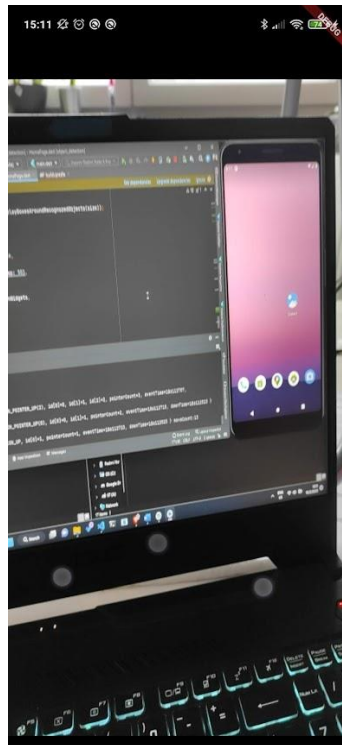
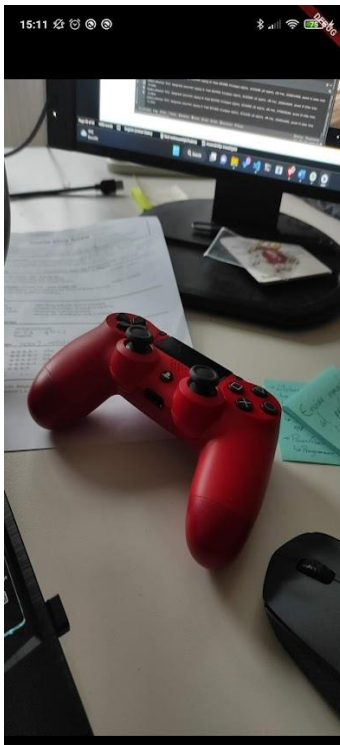
Section 9: Live Object Detection App

Completed Project

Again running on problems with the libraries and new versions of dart with null safety.



So, the final Example is opening the camera but not giving the results and making the boxes for the objects. The new library is **not working** like the old library.



Section 10: More Projects

Conclusion and Link of the repository:

This course took more than the time it should because all the search of new libraries and fixing the error with the new update of Dart, the project in this course has null variables o variables that are initialized later but sometimes this is forgotten but this does not mean the variable is null. Plus, in the Dart documentation is written to avoid null values always.

GitHub repository: https://github.com/DavidSilTroy/Flutter-AI--more_than_15_Apps

Certificate from Flutter Artificial Intelligence Course – Build 15+ AI Apps.

Screenshot from the Udeemy website

The screenshot shows the Udeemy website interface. At the top, there is a navigation bar with the Udeemy logo, a search bar containing 'Buscar cualquier cosa', and links for 'Udeemy Business', 'Enseña en Udeemy', 'Mi aprendizaje', and icons for a heart, shopping cart, bell, and profile. The main content area is divided into two columns. The left column displays a certificate for 'Flutter Artificial Intelligence Course - Build 15+ AI Apps' by 'Coding Cafe'. The certificate includes the Udeemy logo, the course title, the instructor's name 'David Silva Troya', the completion date '17 de Febrero de 2023', and the duration '9.5 horas en total'. It also contains technical details like the certificate number, URL, and reference number. The right column provides information about the recipient, 'David Silva Troya', a student profile picture, and course details including a 3.4-star rating, 99 reviews, and a price of 19,99 €. There are buttons for 'Descarga' and 'Compartir', and a note to 'Actualizar tu certificado'.

El anterior certificado garantiza que [David Silva Troya](#) ha completado con éxito el curso [Flutter Artificial Intelligence Course - Build 15+ AI Apps](#) a fecha de 17/02/2023, habiendo sido impartido por [Coding Cafe](#) en Udeemy. El certificado indica que se ha completado la totalidad del curso, según lo validado por el estudiante. La duración del curso representa el total de horas de vídeo del curso en el momento de finalización más reciente.

Link to see the certificate:

<http://ude.my/UC-abea81af-d031-4744-81ae-4c50a22e89e7>

Deep Learning Course with Flutter & Python – Build 6 AI Apps

Flutter is a framework that use Dart as program language, this was created by Google and allow us to create apps for Android and iOS. Plus, Flutter can be used to create websites. Deep Learning is a specific feel of the Artificial Intelligence where the machine learns from the data, recognizing patterns or improving the detection from predefined or labeled data.

This course has **6.5 hours** in total.

The screenshot shows the Udemy course page for "Deep Learning Course with Flutter & Python - Build 6 AI Apps". The course is by "The A.I. Whisperer" and has a rating of 3.7 stars from 326 reviews. It was last updated in 4/2021. The page features a list of learning objectives, a "Vista previa de este curso" (Course preview) video, and a "Has comprado este curso el Jan. 14, 2023" (You bought this course on Jan. 14, 2023) notification. The course is available for purchase for \$14.99, with a 30-day refund guarantee and lifetime access. The page also includes a "¿La formación es para 5 o más personas?" (Is the training for 5 or more people?) section, which offers a 10% discount for groups of 5 or more people.

Lo que aprenderás

- ✓ Learn how to build State-of-the-Art algorithms in Python and then implement them into a Flutter application!
- ✓ Have a clear understanding of different types of Neural Networks and how you can use them to your advantage.
- ✓ Use different strategies to get Neural Networks with 90%+ accuracy.
- ✓ Building CNN in Python and Implementing it in Flutter
- ✓ Flutter Machine Learning
- ✓ Build any Neural Networks in Python and then export them into your Flutter application.
- ✓ The tools and skills to develop any AI idea you have onto a mobile phone.
- ✓ Building GAN in Python and Implementing it in Flutter
- ✓ Implementing NLP Algorithms in Flutter

¿La formación es para 5 o más personas?

Dale a tu equipo acceso a más de 19.000 de los mejores cursos de Udemy en cualquier momento y lugar.

Prueba Udemy Business

Section 1: Introduction to the Course

Course Introduction

Brief explanations about AI, code editor, framework and the projects we are going to make.

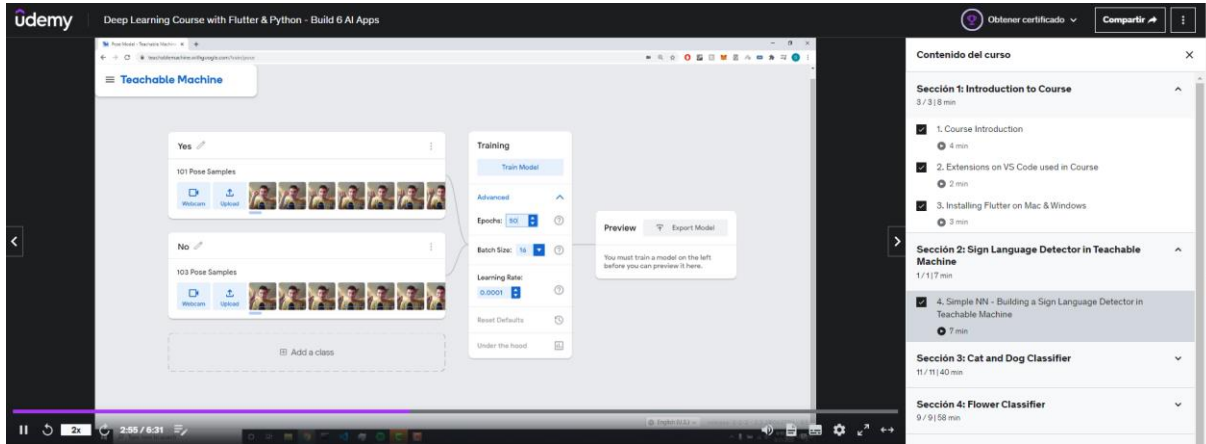
The screenshot shows the video player for the course "Deep Learning Course with Flutter & Python - Build 6 AI Apps". The video is titled "FLUTTER DEEP LEARNING COURSE" and features a presenter in a pink shirt. The video player includes a progress bar at the bottom showing 0:06 / 4:00. On the right side, there is a "Contenido del curso" (Course content) sidebar with a list of sections and lessons:

- Sección 1: Introduction to Course (3 / 3 | 8 min)
 - 1. Course Introduction (4 min)
 - 2. Extensions on VS Code used in Course (2 min)
 - 3. Installing Flutter on Mac & Windows (3 min)
- Sección 2: Sign Language Detector in Teachable Machine (1 / 1 | 7 min)
 - 4. Simple NN - Building a Sign Language Detector in Teachable Machine (7 min)
- Sección 3: Cat and Dog Classifier (1 / 1 | 40 min)
- Sección 4: Flower Classifier

Section 2: Sign Language Detector in Teachable Machine

Simple NN – Building a Sign Language Detector in Teachable Machine

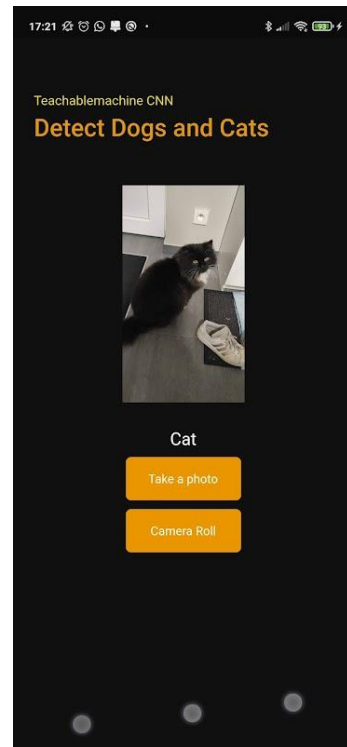
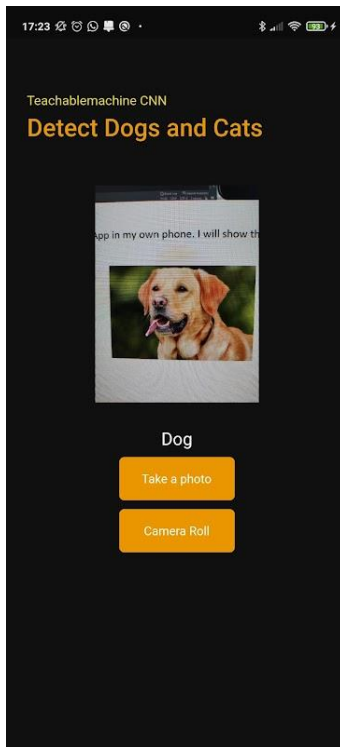
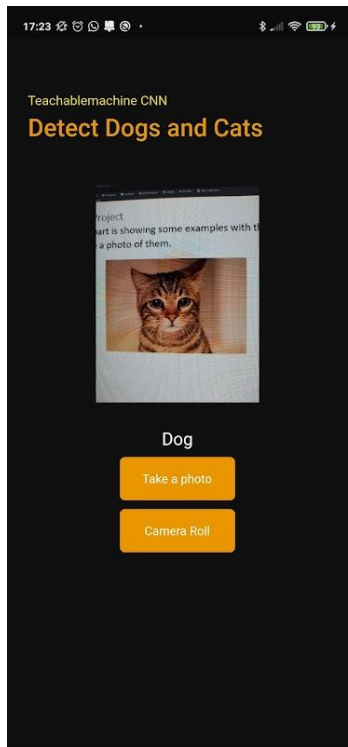
Showing how to use Teachable Machine of Google in the browser to create your own dataset with real time camera and export the model.



Section 3: Cat and Dog Classifier

Completed Project

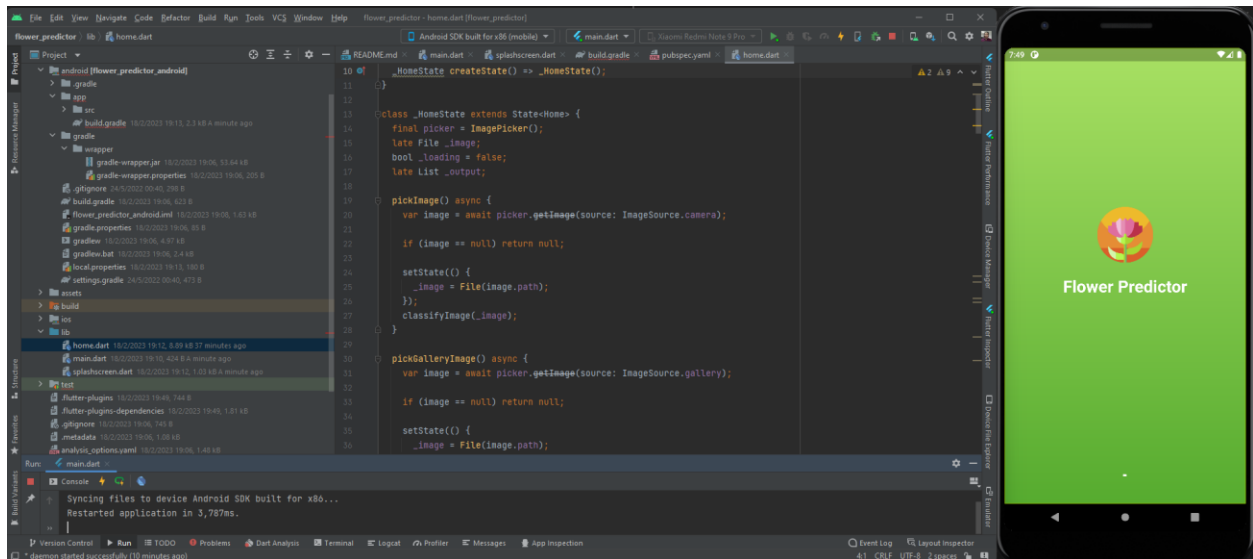
Example of the App working. It is similar to the App from the other class but the model is different, so the result of the prediction can be different. That is why is detecting a dog when it is a cat.



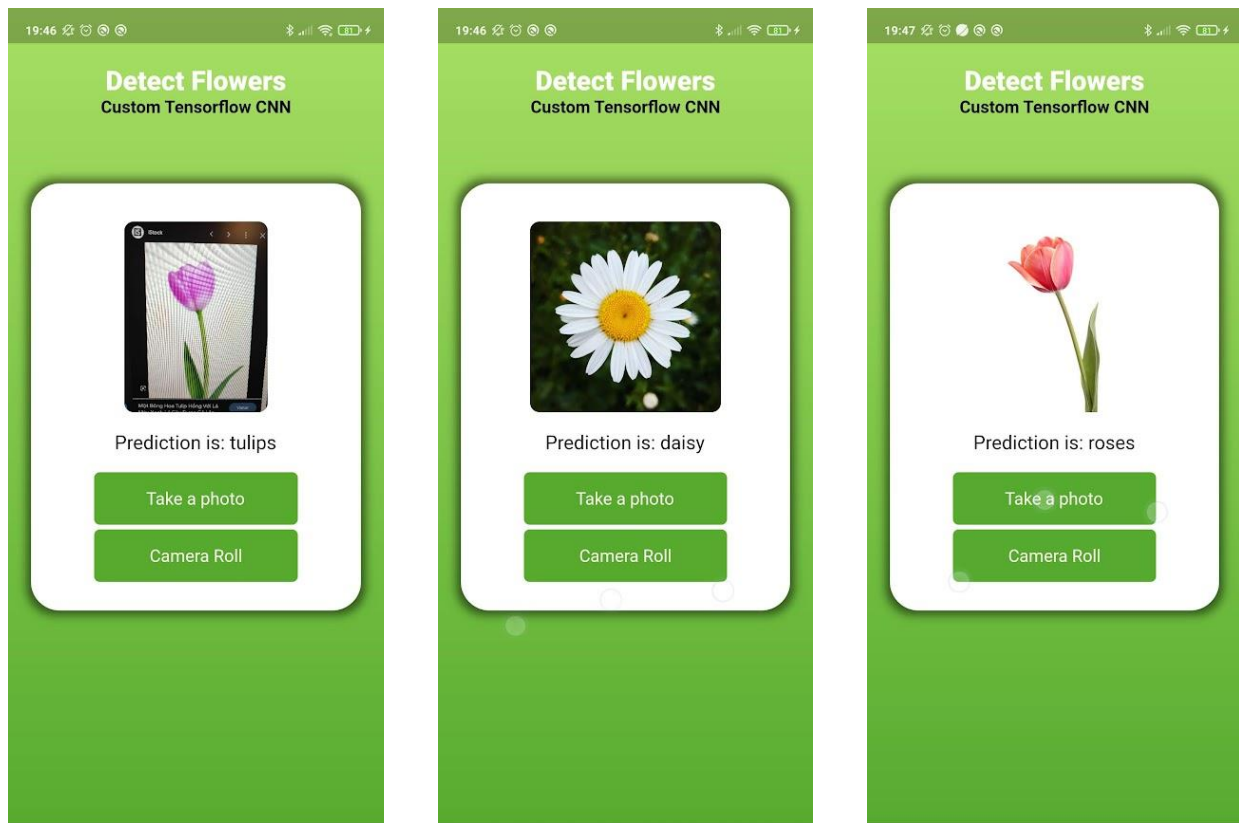
Section 4: Flower Classifier

Completed Project

It works taking a photo or selecting the picture from the gallery.

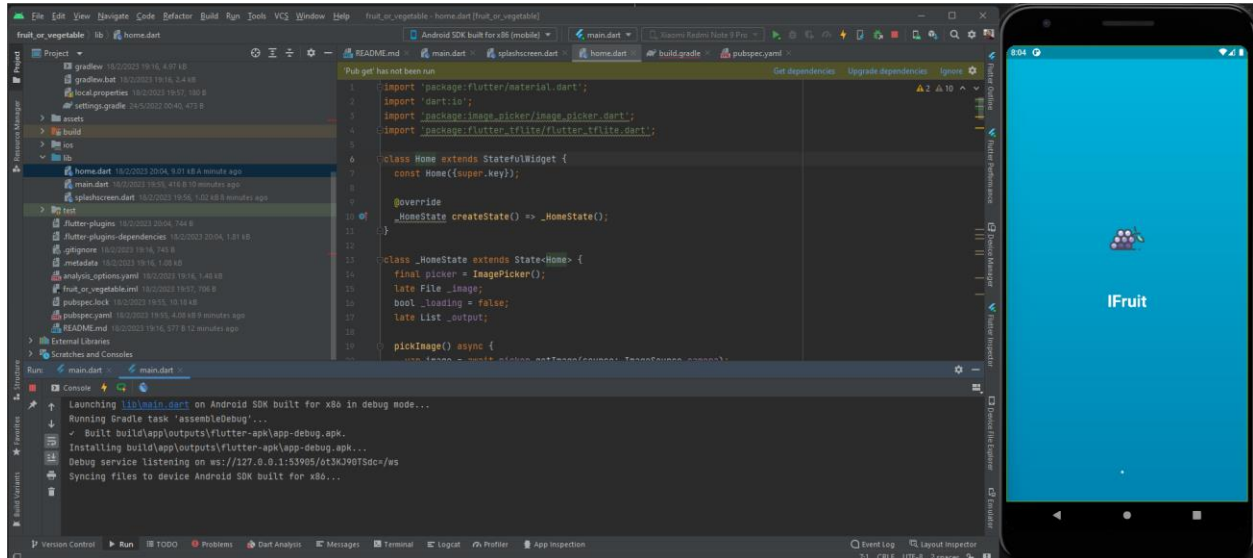


Example of the App working in my phone.

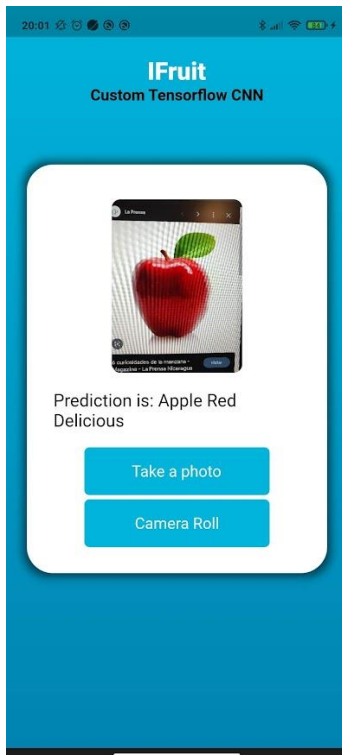


Section 5: Fruit and Vegetable Classifier

Completed Project



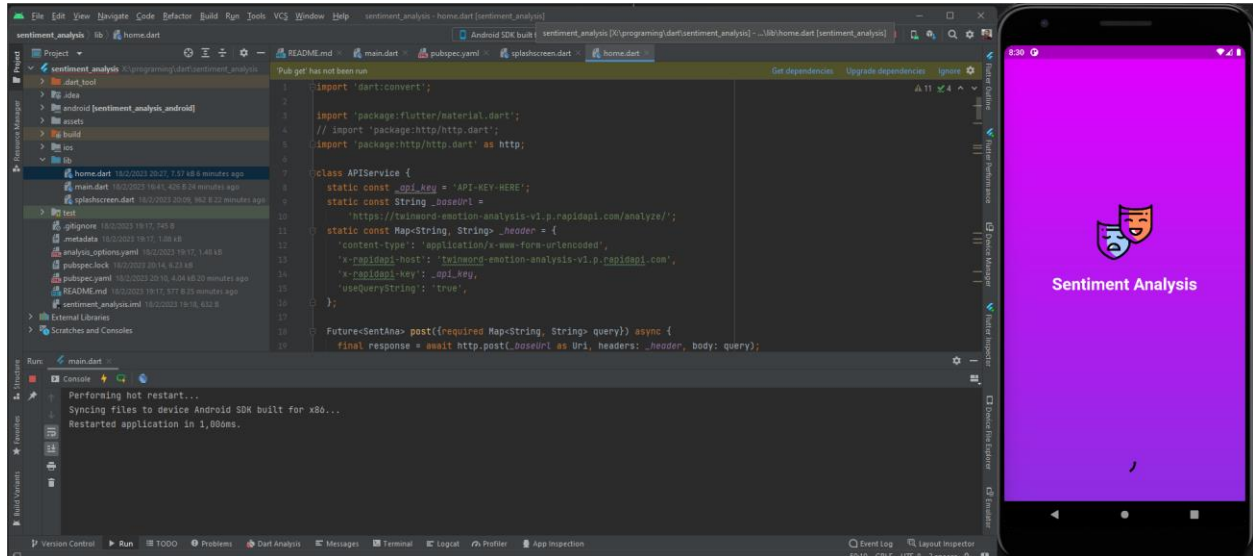
Taking a picture of a photo of an Apple gave a good result but using pictures from the gallery is predicting bad, the model needs more training.



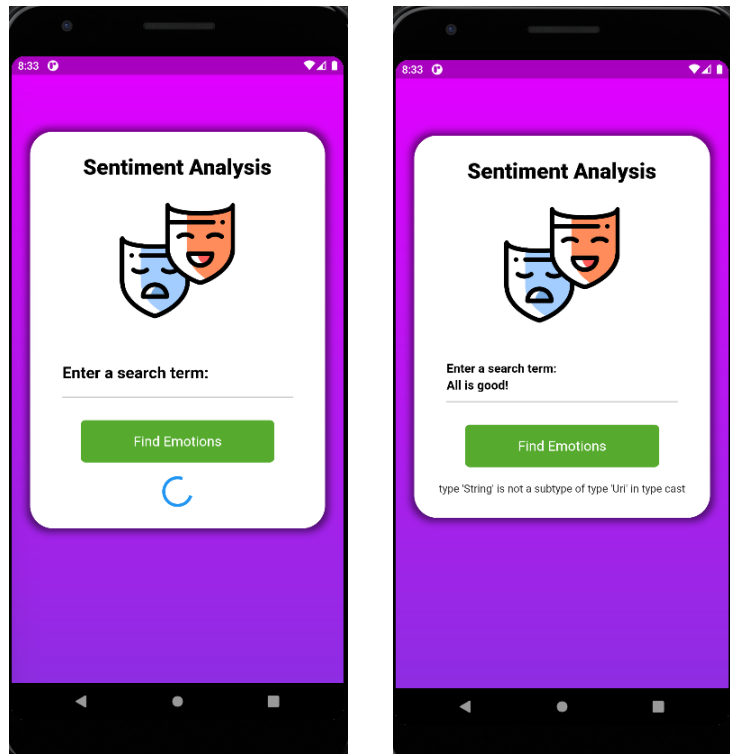
Section 6: Sentiment Analysis NLP Algorithm

Completed Project

The problem with this App is that is using an API that even for the free version ask for the Credit Card number. So the app runs but without an API it doesn't do something



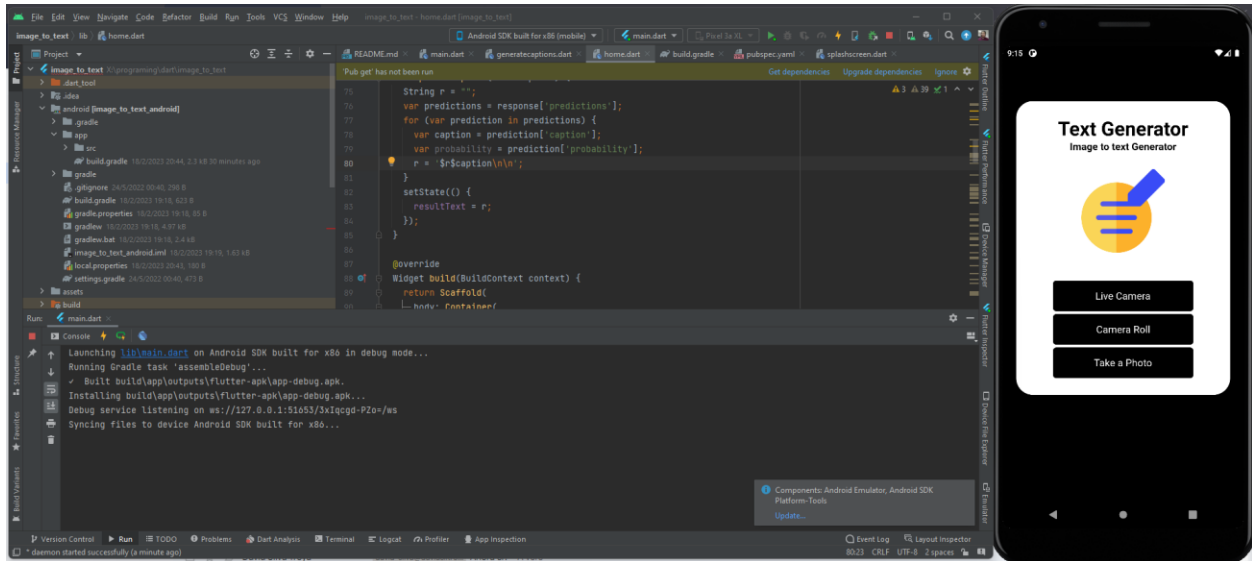
Another problem is the way that the new library for request the API es working, now it need an Uri instead of a String with the url.



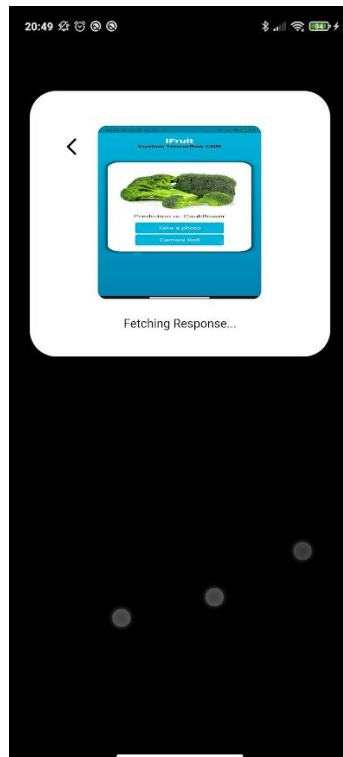
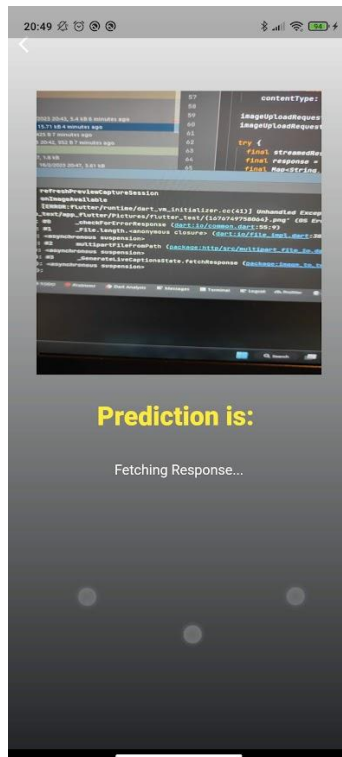
Section 7: Image-To-Text NLP Algorithm

Completed Project

Another project that starts to fail with the update of the libraries, the prediction never comes.



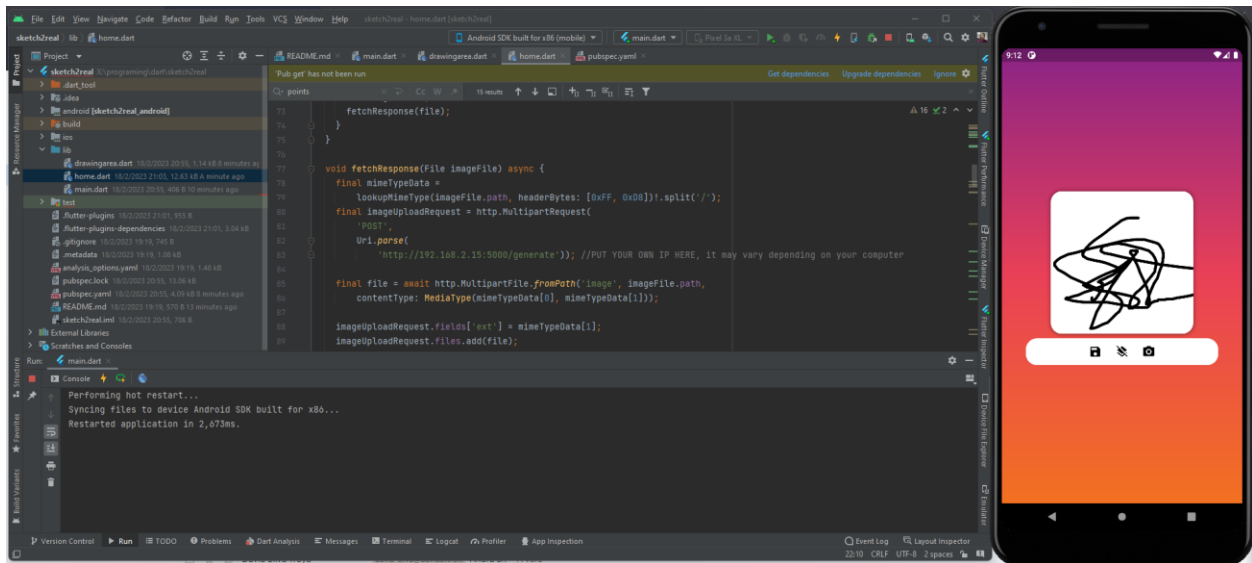
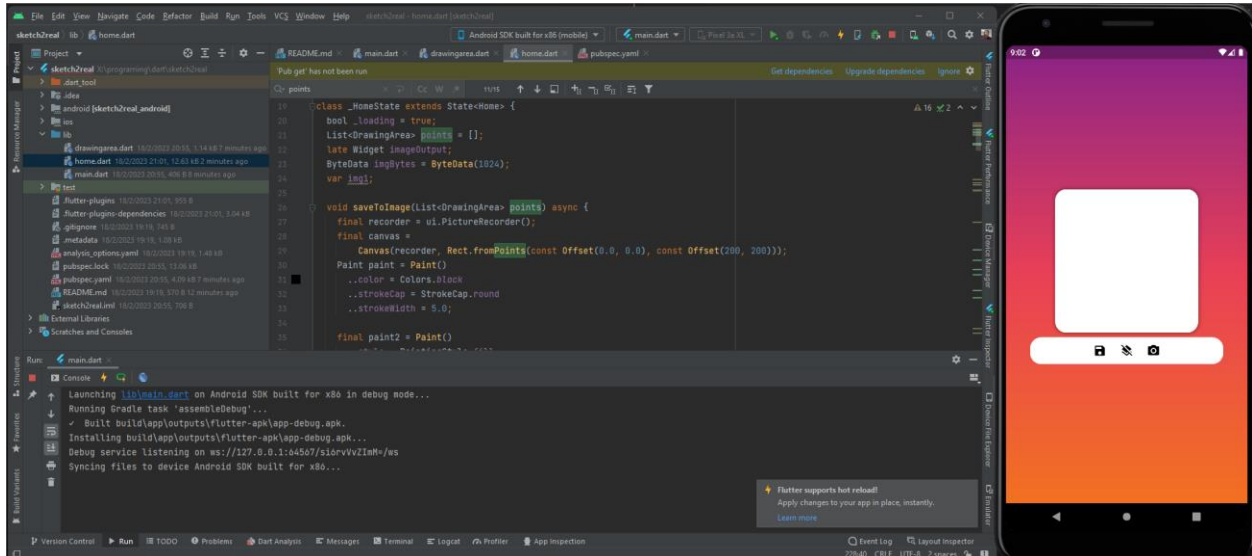
All 3 options stayed in a eternal loading to give back the response, but never worked.



Section 8: Sketch2Real GAN App

Completed Project

With this one it was used an API in python using Flask and Keras, but the library of Keras also had change and the Python Script was giving errors, so at the end was not possible to make the sketch real.



Section 10: Projects

Conclusion and Link of the repository

The speed of the technology changing is giving us better software but, in this case, also the code can be considered “old” too fast when a there is new update from the program language like dart or also from libraries like Keras from TensorFlow. Sadly, in this case the teachers have not update the classes or code to work with the new versions and some programs require a higher knowledge in dart and flutter.

GitHub Repository: <https://github.com/DavidSilTroy/Flutter-AI--DL-6-Apps>

Certificate from Deep Learning Course with Flutter & Python – Build 6 AI Apps.

Screenshot from the Udey website

The screenshot shows a Udey certificate page. The certificate itself is for David Silva Troya, who completed the course on February 14, 2023. The course is titled 'Deep Learning Course with Flutter & Python - Build 6 AI Apps' and is taught by 'The A.I. Whisperer'. The certificate duration is 6.5 hours. The page also displays the course's rating (3.7 stars) and price (19,99 €). The Udey logo and navigation menu are visible at the top.

Destinatario del certificado:
David Silva Troya
Mechatronic Engineer | Applied Computer Science Student

Acerca del curso:
Deep Learning Course with Flutter & Python - Build 6 AI Apps
The A.I. Whisperer
3,7 ★★★★★ (327)
6,5 horas en total - 64 clases
19,99 €

[Descarga](#) [Compartir](#)

Actualiza tu certificado con tu nombre correcto o idioma preferido

El anterior certificado garantiza que David Silva Troya ha completado con éxito el curso Deep Learning Course with Flutter & Python - Build 6 AI Apps a fecha de 14/02/2023, habiendo sido impartido por The A.I. Whisperer en Udey. El certificado indica que se ha completado la totalidad del curso, según lo validado por el estudiante. La duración del curso representa el total de horas de vídeo del curso en el momento de finalización más reciente.

Link to see the certificate:

<http://ude.my/UC-5fa10a85-6da6-4d8b-981d-2cbcc2f9603e>