SF Module 5

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Things We Will Be Covering In This Session:

1. Figma
2. Web Basics
3. Quick Introduction To Django Framework

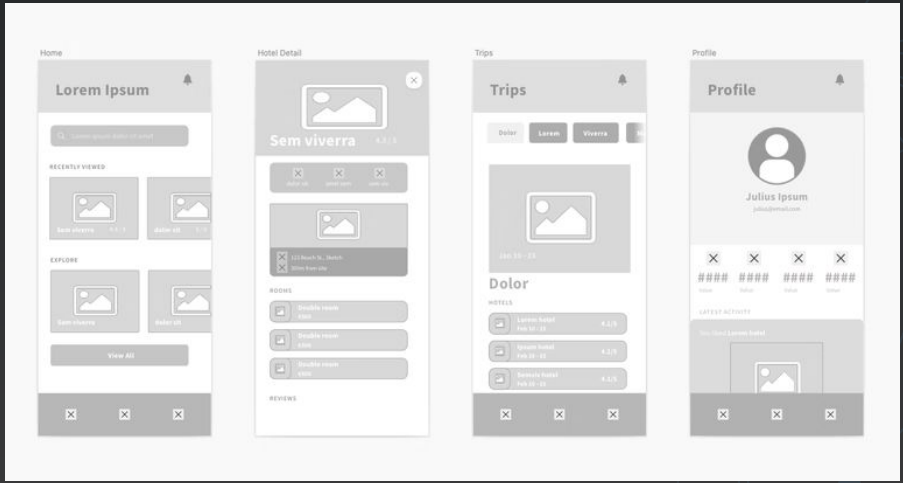
Figma

Before we begin, some keywords

1. Wireframe
2. Mockup
3. Prototype

Wireframe

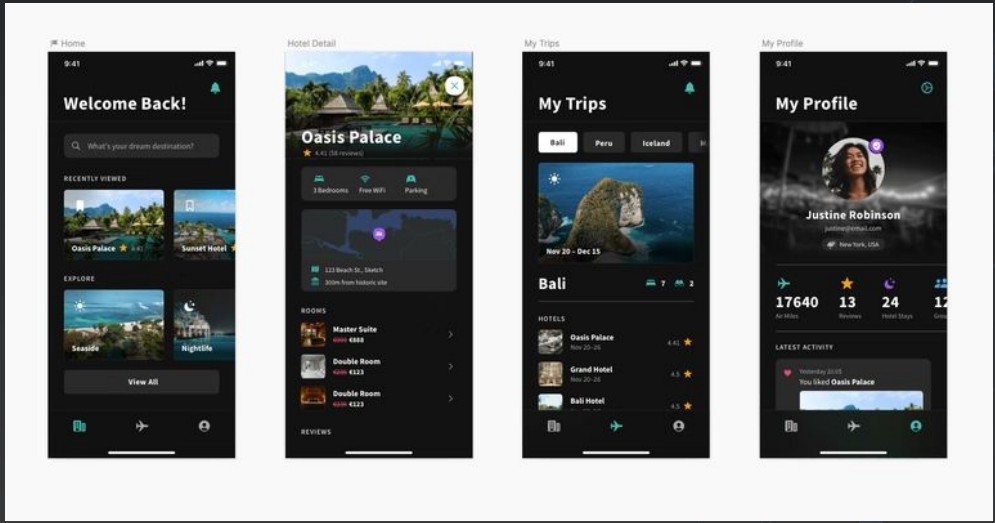
1. Shows the app's or website's page structure while providing basic information about elements in the UI
2. Helps everyone in the team to understand what you're trying to achieve.



Mockup

1. High-fidelity renders of the product's design that showcase how the finished product will look.
2. Helps in communicating what you want your final product to look like.

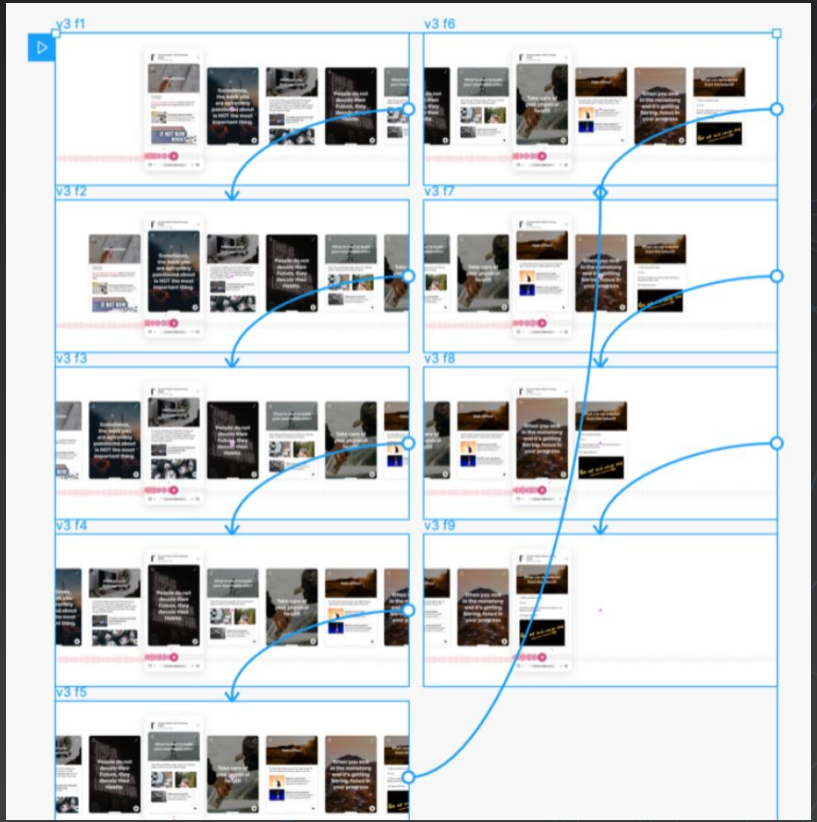
   Eg: Figma, Adobe XD



Prototype

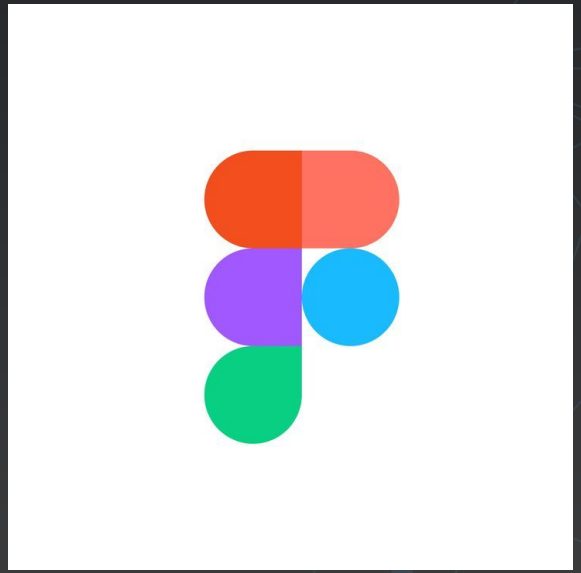
1. Models of the project that mostly focuses on functionality.
2. Processes are simulated and user interactions are tested.

   Eg: Figma, InVision Studio, Webflow



Why Figma?

1. Better for team collaboration.
2. Works on any platform.
3. Sharing is flexible.
4. Large set of plugins for easier design.
5. Accommodates design review & feedbacks.
6. Provides API for Third-Party Tool Integration.
7. Provides file versioning.
8. Easy to learn & get started.



Good News!

Signing up with your pcampus account provides a lifetime of Figma Professional Account.

Basic Things Inside Figma (Demo)

1. Navigating the UI
   a. Zooming & moving around
2. Frames
   a. Constraints
3. Shapes
   a. Circles, rectangle, line.
   b. Shape properties.
   c. Vector selection mode.
4. Text
5. Layers
   a. Ordering layers
   b. Grouping layers

Miscellaneous

1. Pen Tool
2. Clipping Mask
    a. Clipping shape - Below layer.
    b. To be clipped - Above layer.
3. Plugins
    a. **Finding Plugins:** Figma > Plugins > Find
    b. **Using Plugins:** Figma > Plugins > Installed Plugins
4. Components
5. Alignments (Horizontal, Vertical)
6. Spacing (Horizontal, Vertical)

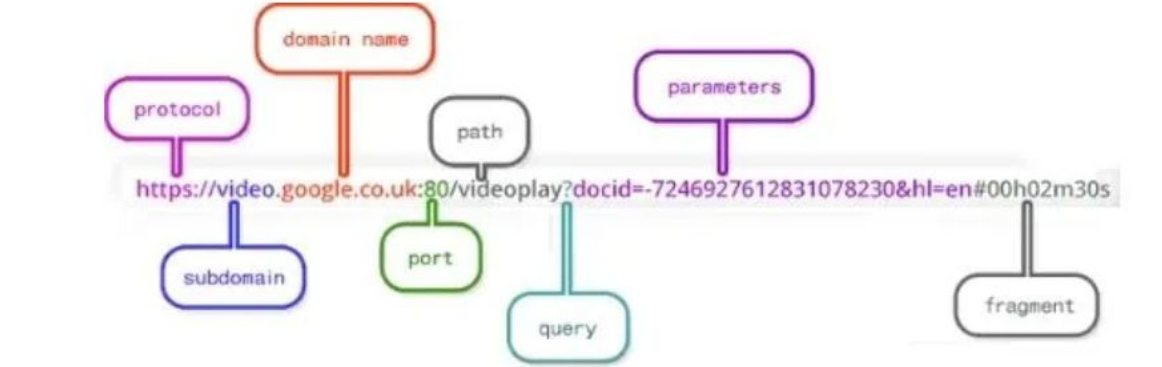
Some Useful Shortcuts

1. Zoom In / Out – Ctrl +, Ctrl –
2. Rectangle – R
3. Ellipse – O,
4. Line – L
5. Text – T
6. Enable / Disable Rulers – Shift R
7. Move object – Arrow Up / Down / Left / Right
8. Move object by 10 units – Shift + Arrow Up / Down / Left / Right
9. See distance B/W two objects – Ctrl MouseHover

Basics of Web

Some Quick Web Terms

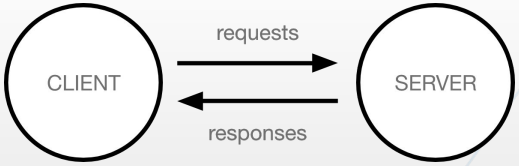
1. **IP Address**
   - Unique address that identifies a device on the internet or a local network.
   - Eg: 64.233.160.0
2. **URL**
   - Unique identifier used to locate a resource on the Internet.1



Some Quick Web Terms

1. **DNS (Domain Name System)**
   - Phonebook of the Internet
2. **HTTP Request:**
   - Request made by a client to a named host which is located on a server.
   - Aim: To access a resource on the server.
3. **HTTP Response:**
   - Response given by the server.
   - Aim: To provide the client with the resources it requested, or inform the client that the action it requested has been carried out.
4. **HTTP Status Code**

How The Web Works



1. address = browser.goTo(dns).get('real-address');
2. browser.send(request).to(server);
3. if(server.approve(client.request)) {

        return response.status(200).json(data);
   }

4. browser.assemble(response.chunks).displayAs('web-page');

HTML & CSS

HTML - HyperText Markup Language

1. Standard markup language for web pages.
2. Bare bone structure of the web.
3. Assisted by CSS & JS

HTML Structure

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <title>Software Fellowship</title>
5  </head>
6  <body>
7      Hello, Pulchowk!
8  </body>
9  </html>
```

Some Common HTML Elements

1.
2. <p>
3. <a />
4. <img />
5.
6.
7.
8. <form>
9. <input />
10. <h1> to <h6>
11. <button>

Other Types of HTML Elements

1. <meta />
2. <title>
3. <link />
4. <style>
5. <script>
6. <canvas />
7. <audio>
8. <video>

Semantic HTML Elements

1. <header>
2. <nav>
3. <main>
4. <section>
5. <article>
6. <figure>
7. <figcaption>
8. <blockquote>
9. <cite>
10. <aside>

More Semantic HTML Elements

1. <footer>
2. <code>
3.
4. <picture>
5. <source>
6. <legend>
7. <details>
8. <summary>

Importance of Semantic HTML

1. Makes web pages more informative and adaptable.
2. Allows **web crawlers** (bots created by search engines to retrieve contents from the web page) to better interpret contents.
3. Improves ranking on search engines.
4. Better for SEO.

More about HTML: https://developer.mozilla.org/

CSS - Cascading Style Sheet

1. Language we use to style an HTML document.
2. Describes how HTML elements should be displayed.

CSS - Most Common Selectors

1. div
2. #id
3. .class

There are other **advanced** selectors as well.

Like selecting from an attribute or sibling, general selectors. Targeting an element's pseudo classes & pseudo elements as well.

But the above mentioned 3 selectors are most commonly used.

CSS - Demo

1. Basic Styling
    a. Box Layout
    b. Height, width, margin, padding, border, outline.
    c. Color, background.
2. Text Styling
    a. Fonts ~ Importing fonts into HTML or CSS.
    b. Line height, word spacing
    c. Text alignment
3. Layout
    a. Positioning
    b. Flexbox & Grid
    c. Responsive Layout (@media only screen and (min / max-width: 600px)

Inspecting & Debugging CSS - Demo

1. Developer Tools

CSS Preprocessors

1. SASS – Syntactically Awesome Style Sheet
2. LESS – Leaner Style Sheet
3. Stylus
4. PostCSS

Some Popular CSS Frameworks & Libraries

1. Bootstrap
2. Tailwind
3. Foundation
4. Bulma
5. Skeleton

JS

JavaScript

1. Lightweight, interpreted programming language.
2. Functional, Object Oriented
3. Imperative(How) & Declarative (What).
4. For web and beyond.

DJANGO

DJANGO

1. High-level python web framework
2. Encourages rapid development and clear, pragmatic design.
3. Very secure and scalable.
4. Opinionated.

DJANGO - Installation

1. Install python.

   $ pip install virtualenv

2. Create virtualenv and activate.

   $ python -m venv env

   $ source ./env/bin/activate (Mac / Linux / WSL)

   $ env\Scripts\activate (Windows)

   $ cd env/Scripts && . activate (Git Bash)

3. Install django

   $ pip install Django

4. Verify if django is installed.

   $ python -m django –version or django-admin –version or pip freeze | grep Django or python manage.py –version

Creating Project

```
$ django-admin startproject mysite
```

Starting Dev Server

```
$ python manage.py runserver
```

Creating App

```
$ python manage.py startapp app
```

Thank You :)