COMSATS UNIVERSITY ISLAMABAD, ABBOTTABAD CAMPUS

SDA

ASSIGNMENT 02

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Submitted to:

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Topic:

Evolution of Tailwind CSS Architecture

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Tailwind CSS Evolution Report

1. Introduction

Tailwind CSS is a utility-first CSS framework for rapidly building custom designs. It emphasizes low-level utility classes that eliminate the need for custom CSS.

2. Evolution of Architecture

Tailwind CSS v1.x
Release Notes: **https://v1.tailwindcss.com/docs/release-notes**

Release Date: May 13, 2019

Major Features:

- Introduction of the utility-first CSS approach.

- Default configuration file for customization (tailwind.config.js).

- Basic utilities for spacing, colors, typography, and layout.

Release Notes: Utility-based design to streamline development.

Tailwind CSS v2.x
Release Notes: **https://tailwindcss.com/blog/tailwindcss-v2**

Release Date: November 18, 2020

Major Features:

- Expanded color palette with more shades.

- Support for dark mode using media or class strategies.

- Added utilities for animation, outline, and forms.

- Introduction of Just-in-Time (JIT) mode (experimental).

Release Notes: Enhanced configuration and dark mode.

Tailwind CSS v3.x
Release Notes: **https://tailwindcss.com/blog/tailwindcss-v3**

Release Date: December 9, 2021

Major Features:

- Full support for Just-in-Time (JIT) mode by default.

- Arbitrary value support for utilities.

- Enhanced performance and faster build times.

- Utility support for CSS grid, filters, and transitions

Release Notes: Optimized builds with advanced utility features.

3. Group Member Contributions

- M Shahzeb has done the research of all 3 version
- Waqas Ahmed has done all the architecture Diagram
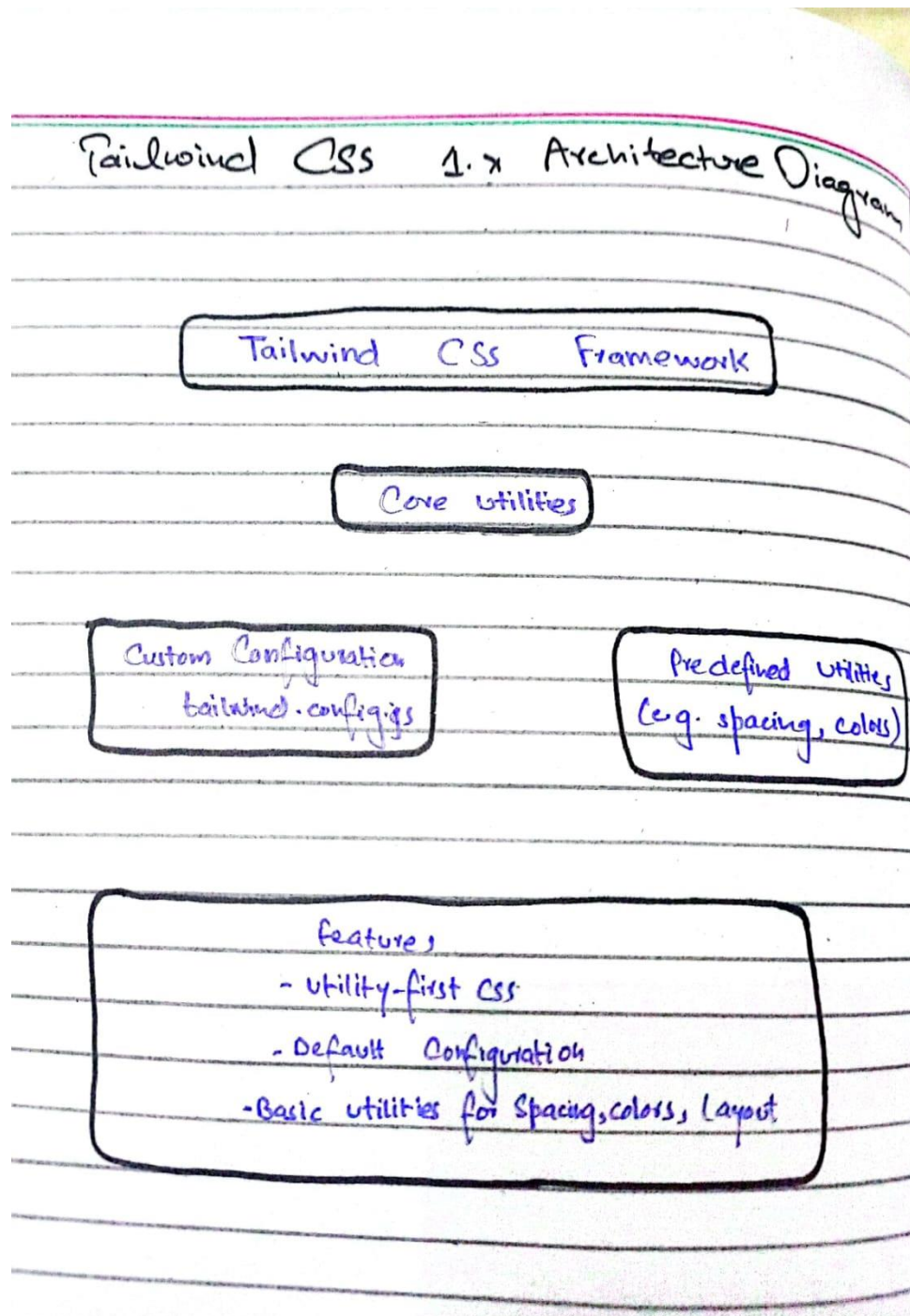- Formatting and documentation are done by both M shahzeb and Waqas Ahmed

4. Conclusion

- The evolution of Tailwind CSS highlights the transformative power of utility-first frameworks in modern web development, emphasizing flexibility and speed.
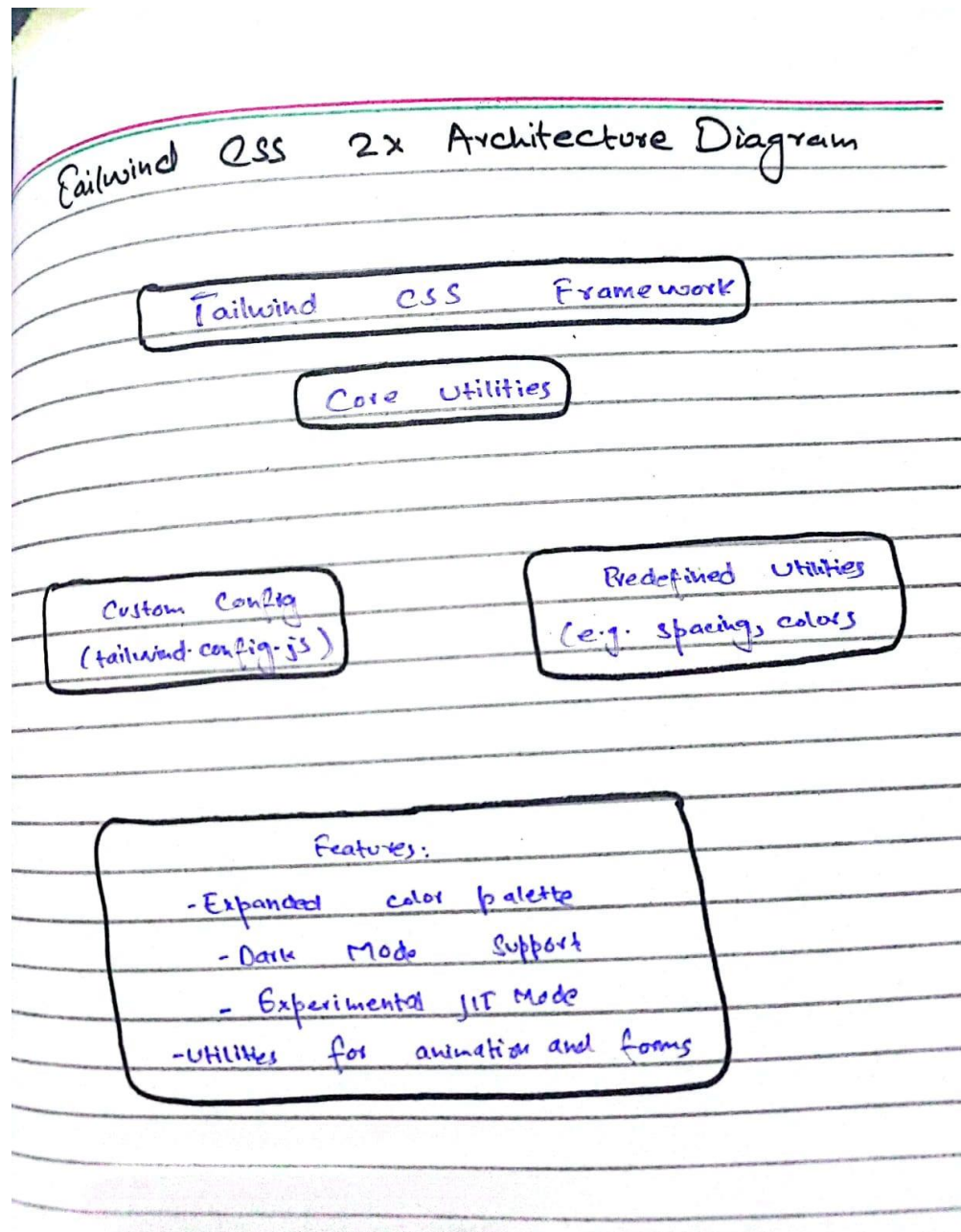
5. References

- Tailwind CSS Official Site

- Tailwind CSS GitHub Repository

Architecture Diagram for Tailwind CSS v1.x

Tailwind CSS 1.x Architecture Diagram

Tailwind CSS Framework

Core utilities

Custom Configuration
tailwind.config.js

Predefined Utilities
(e.g. spacing, colors)

features
- utility-first CSS
- Default Configuration
- Basic utilities for Spacing, colors, Layout

Architecture Diagram for Tailwind CSS v2.x

Tailwind CSS 2x Architecture Diagram

Tailwind CSS Framework

Core Utilities

Custom Config
(tailwind·config·js)

Predefined Utilities
(e.g. spacing, colors)

Features:
- Expanded color palette
- Dark Mode Support
- Experimental JIT Mode
- Utilities for animation and forms

Architecture Diagram for Tailwind CSS v3.x

Tailwind CSS 3x Architecture Diagram

Tailwind CSS Framework

Core Utilities

Custom Configuration
(tailwind. config.js)

Pre-defined Utilities
(e.g. spacing, colors)

Features :

- JIT mode by default
- Arbitrary value Support
- Performance enhancements
- Utilities for grid, filters, and transitions