CS3300 – Introduction to Software Engineering

John Doe Portfolio
March 5th, 2025

Department of Computer Science
University of Colorado, Colorado Springs
Spring 2025

Team Members and Roles:

- Jack Dodge – Developer, Tester, Product Owner

- West Manison – Developer, Tester, Test Coordinator

- George Morales – Developer, Tester, Lead-Tech Writer

- Sebastian Sanchez – Developer, Tester, UI/UX Dev.

Project Introduction:

John Doe Portfolio

We aim to develop a visually appealing and responsive portfolio website that effectively showcases John Doe's projects, experience, and skills. The website will feature a dynamic home page and three distinct project pages, allowing users to navigate seamlessly and access detailed information about each project. Our goal is to create an engaging user experience that highlights John Doe's expertise and professional achievements.

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Jack Dodge

<u>Problem Statement:</u>

How does someone stand out in a competitive and evolving job market?

Our answer: differentiation. A portfolio website dedicated to a job-seeker's projects, CV, and other important information allow a job-seeker to stand out. A portfolio is a demonstrable product that allows for hiring-managers and others who may be interested, to quickly identify skills, interests, and experience.

Software Engineering Principles:

Judgment:

- Software engineers will maintain a level of integrity and independence within their own professional judgment. We hope to prioritize the website accessibility and security. Making thoughtful design and content decisions

Public:

- Software engineers should act in the interest of the public. Offering a level of transparency for link redirection, data collection and user traffic. Ensuring the user is free of any misleading or harmful content

Management:

- Software engineers uphold an ethical approach to the management of software development and maintenance. Encouraging the Responsible decision making and accountability throughout the development and maintenance of the website

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Sebastian Sanchez

Ethics Observation:

- Authenticity Concerns

    - Our primary ethical concern relates to ensuring anyone viewing the portfolio can entrust the integrity and authenticity of the website. This includes ensuring all external link are legitimate and verified and offering transparency with data collection and utilization.

    - We hope by providing proper documentation such dedicating pages to authentication, showing code snippets, comments, and a possible timelapse videos of development can strength the integrity of the portfolio.

- Ethic Re-evaluation:

    - After reach either milestone or stretch goal, we will need to re-evaluation the ethical observations throughout the portfolio when need be.

    (specifically for data collection, user validation, project encryption, etc.)

Software Engineering Tools

- Web Development
  - Visual Studio Code (IDE)
  - HTML5 (Hypertext Markup Language 5)
  - CSS (Cascading Style sheet –Version 4.15-)
  - JavaScript – ECMAScript 2023

- Git/GitHub
  - Version control
  - GitHub Pages (Host)

- DNS Provider [TBD]
  - Azure, GoDaddy, AWS, etc.

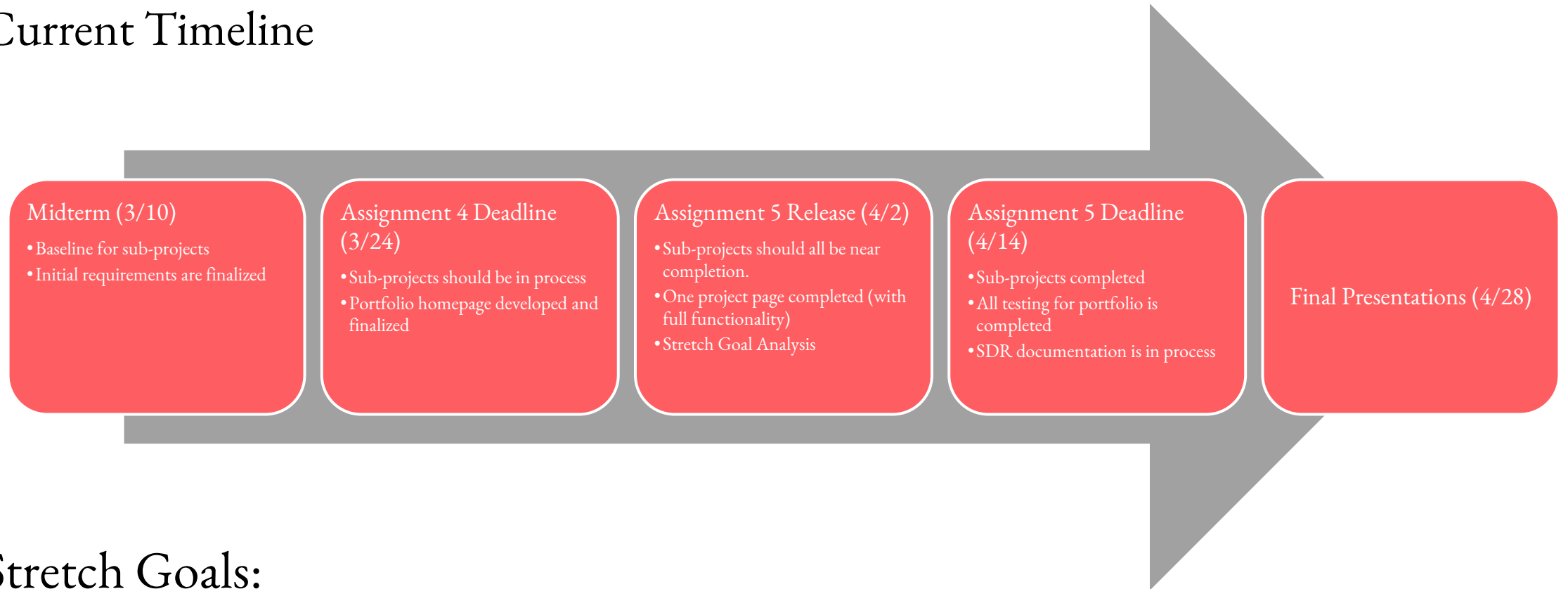- Testing [TBD]
  - Manual
  - Jest, Mocha, Jasmine (Javascript)
  - Playwright (user interaction simulation; end-to-end testing)

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West Manison

Project Schedule

Current Timeline

Midterm (3/10)
- Baseline for sub-projects
- Initial requirements are finalized

Assignment 4 Deadline (3/24)
- Sub-projects should be in process
- Portfolio homepage developed and finalized

Assignment 5 Release (4/2)
- Sub-projects should all be near completion.
- One project page completed (with full functionality)
- Stretch Goal Analysis

Assignment 5 Deadline (4/14)
- Sub-projects completed
- All testing for portfolio is completed
- SDR documentation is in process

Final Presentations (4/28)

Stretch Goals:
- Web Service (Mountain Lion Gateway) that can host multiple users' portfolios.
- Page tracker/algorithm to monitor page activity (clicks, time visited, etc.)

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Project Requirements

- Requirements are split by team member.

- Stretch goal category will be filled as needed.

	REQUIREMENT	Due Date	Progress
10			
11	**REQUIREMENT**	**Due Date**	**Progress**
12	Everyone		
13	SDP	5-Mar	In-Progress
14	Midterm Presentation (SDP)	5-Mar	In-Progress
15	Website	19-Mar	In-Progress
16	Setup Github Repo	12-Mar	Completed
17	SDR	9-Apr	Need-To-Start
18	Stretch goal analyis	31-Mar	Need-To-Start
19	Jack Dodge		
20	Blackjack Game	9-Apr	Need-To-Start
21	West Manison		
22	Tic Tac Toe Game	9-Apr	Need-To-Start
23	George Morales		
24	Snake Game	9-Apr	In-Progress
25	Sebastian Sanchez		
26	Embed Hard-Coded Linear Algebra decrypter	23-Mar	Need-To-Start
27	**STRETCH GOALS**		

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Project Architecture

- Since GitHub Pages is a static site hosting service, we are limited to front-end technologies. This means our architecture will primarily focus on HTML, CSS, and JavaScript, with no back-end server or database capabilities:

  o **HTML:** Structure of the main page and each mini-project.

  o **CSS:** Global styles, possibly with a CSS framework (e.g., Tailwind or Bootstrap).

  o **JavaScript:** Dynamic behavior and rendering of projects.

  o **UI Components:** Project cards, navigation bar, and footer as modular components.

Project Design

Collaborative Web application Development area for UX/UI interface Development

(Currently only a Conceptualization)

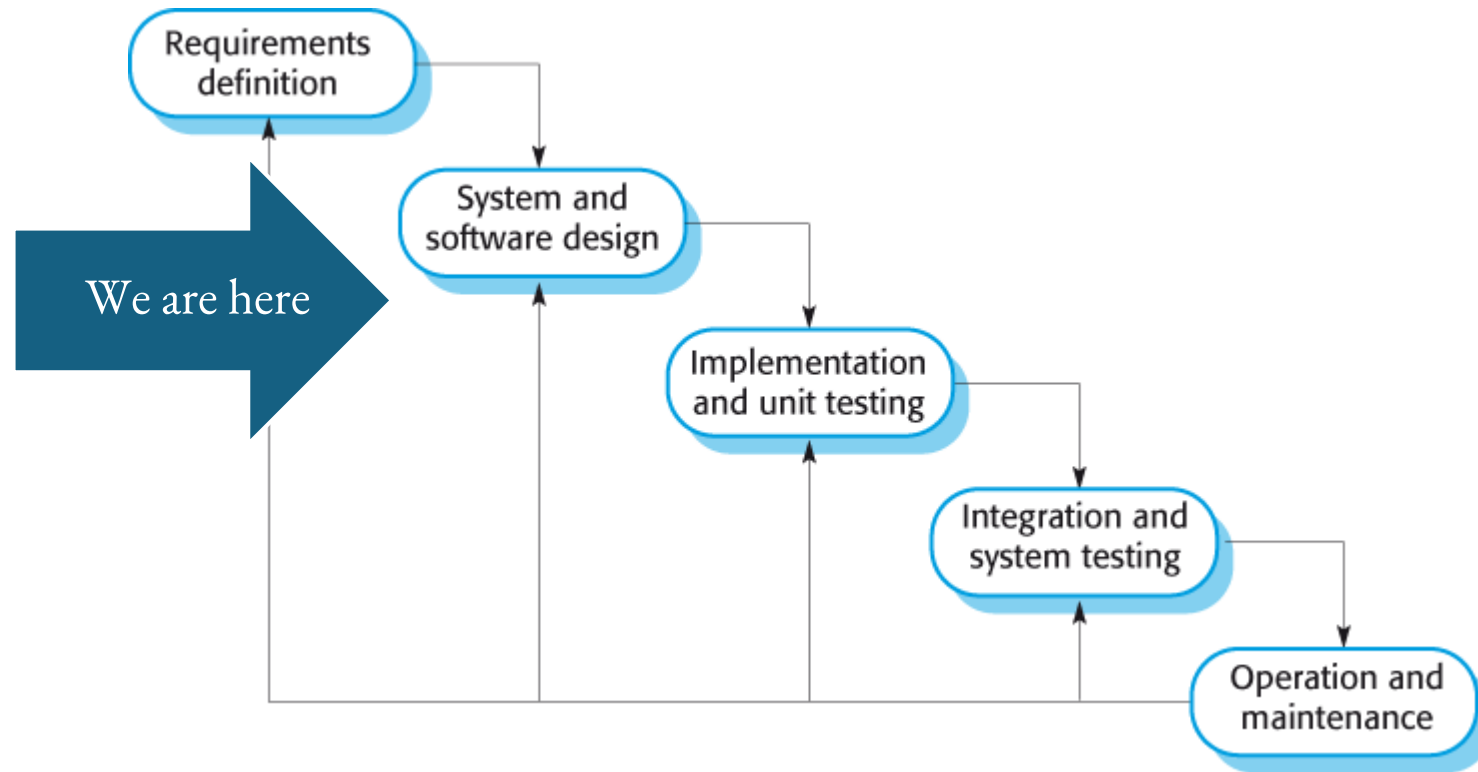Will mostly likely see version improvement moving forward

Project Model

- The model that we will use to complete this project will be the waterfall model due to its simple and straightforward design and structure

Project Configuration Management

- **Version Control**: GitHub

- **Dependencies**: Front-End Libraries/Frameworks, GitHub Pages (static pages only)

- **Testing**: Pair Programming (manual testing), Automated Testing Software

- **Deployment**: GitHub Pages and a DNS provider

- **Documentation**: README.md, Code Comments, Project Wiki (GitHub)

- **Licensing**: MIT License

Project Verification

- Test Driven Development [TDD]

  - User/End-to-End Testing: Manual, Playwright (for simulating user interactions)

  - Unit/Integration Testing: Manual, Jest, Mocha, Jasmine (JavaScript testing software)

- "Pair Programming"

  - Instead of a Driver/Navigator pair, the pairing will be Developer/Tester. TDD requires that we write tests before developing code, meaning Developer/Tester communication needs to happen immediately and because of this pairing, each team member should consistently be interacting with more than 50% of the code base.

42	West Manison						
43		Color of O	12-Mar	In-Progress	T	T	Morales	
44		Color of X	12-Mar	In-Progress	T	T	Morales	
45		Color of Board	12-Mar	In-Progress	T	T	Morales	
46		Background Color	8-Mar	Need-To-Start	T	T	Morales	
47		Interactivity	23-Mar	Need-To-Start	T, A, I, O	T, A, I, O	Morales	
48		Winning algorithm	2-Apr	Need-To-Start	T, A, I, O	T, A, I, O	Morales	
49		Tic Tac Toe Game	9-Apr	Need-To-Start	T, A, O	T, A, O	Morales	
50	George Morales						
51		Create Initial Board	12-Mar	In-Progress	T, I	T, I	Sanchez	
52		Create Snake Character	12-Mar	In-Progress	T, A, O	T, A, O	Sanchez	
53		Proper snake movement on board	12-Mar	In-Progress	T, A, O	T, A, O	Sanchez	
54		Create object for snake to consume	23-Mar	Need-To-Start	T, A, I, O	T, A, I, O	Sanchez	
55		Create snake length mechanichs	2-Apr	Need-To-Start	T,A, I, O	T,A, I, O	Sanchez	
56		Colors	2-Apr	Need-To-Start	I, O	I, O	Sanchez	
57		Score Tracker	2-Apr	Need-To-Start	T, I, O	T, I, O	Sanchez	
58		Snake Game	9-Apr	In-Progress	T, A, O	T, A, O	Sanchez	
59	Sebastian Sanchez						

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West Manison

Project Risk Management

RISK	Prob.	Impact	Mitigation
Scheduling Conflicts (Person)	High	Medium-Low	Ensuring open communication. When we cannot meet in person, making sure that we're using alternative communication (Discord, text, etc.).
Scope Creep (Project)	Medium	High	Stay true to the Requirements Spreadsheet and don't work outside of necessary constraints before there is available time.
Programmer is unable to finish requirements by the corresponding due dates (Person)	Medium	Medium	Other programmers can come in to assist in the completion of the requirements to keep the schedule intact.

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George Morales

Project Completion

- Functional Portfolio Website:

    - The main page and all sub-projects are fully developed and integrated.

- Testing is Complete:

    - All unit, integration, and user tests are successfully passed.

- Documentation is Finalized:

    - README, project wiki, and technical documentation are complete.

- Deployment is Successful:

    - The website is live on GitHub Pages.

05 March 2025   Jack Dodge

Questions???