

iConcept Orthodontics - Interactive Textbook

COMP90082_2025_SM1 Software Project – Final Presentation

Team RedBack		
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Introduction

Introduction

Problem

Orthodontics learning is highly based on traditional method

Learners hard to see the progress of treatment within textbook

Need student insight during teaching



Goal

Ensuring accessibility through mobile devices

Building a student-driven self-paced learning environment

Innovation in the orthodontics learning method

The project aims to develop an interactive textbook regarding orthodontics to improve the studying and teaching quality of students, lecturers, as well as dentists.

Client Expectations for Project



Resolving Current Issues



UI/UX Enhancements



Performance Upgrade



Analysing User Data

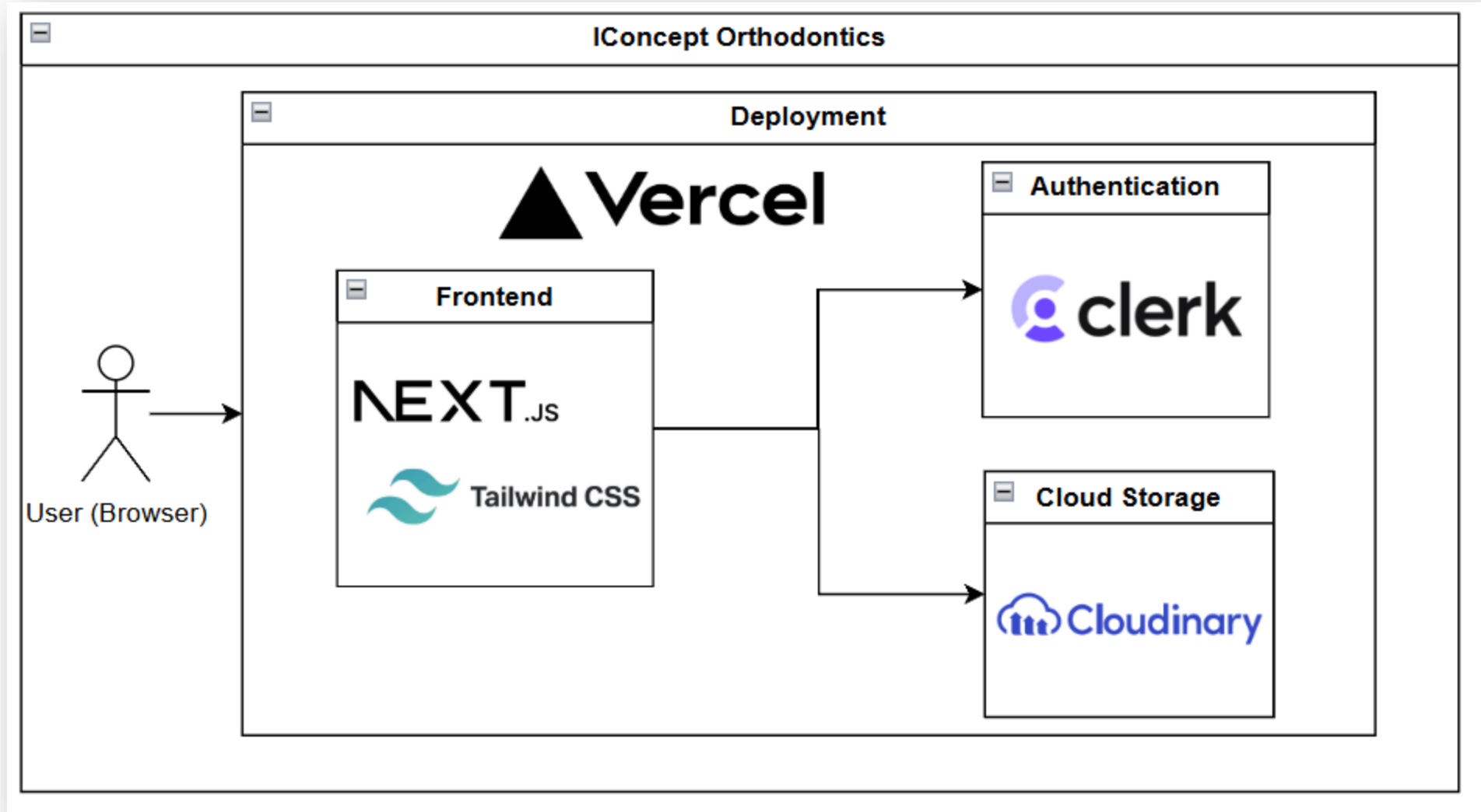


Adding New Contents



Demonstration

Design architecture

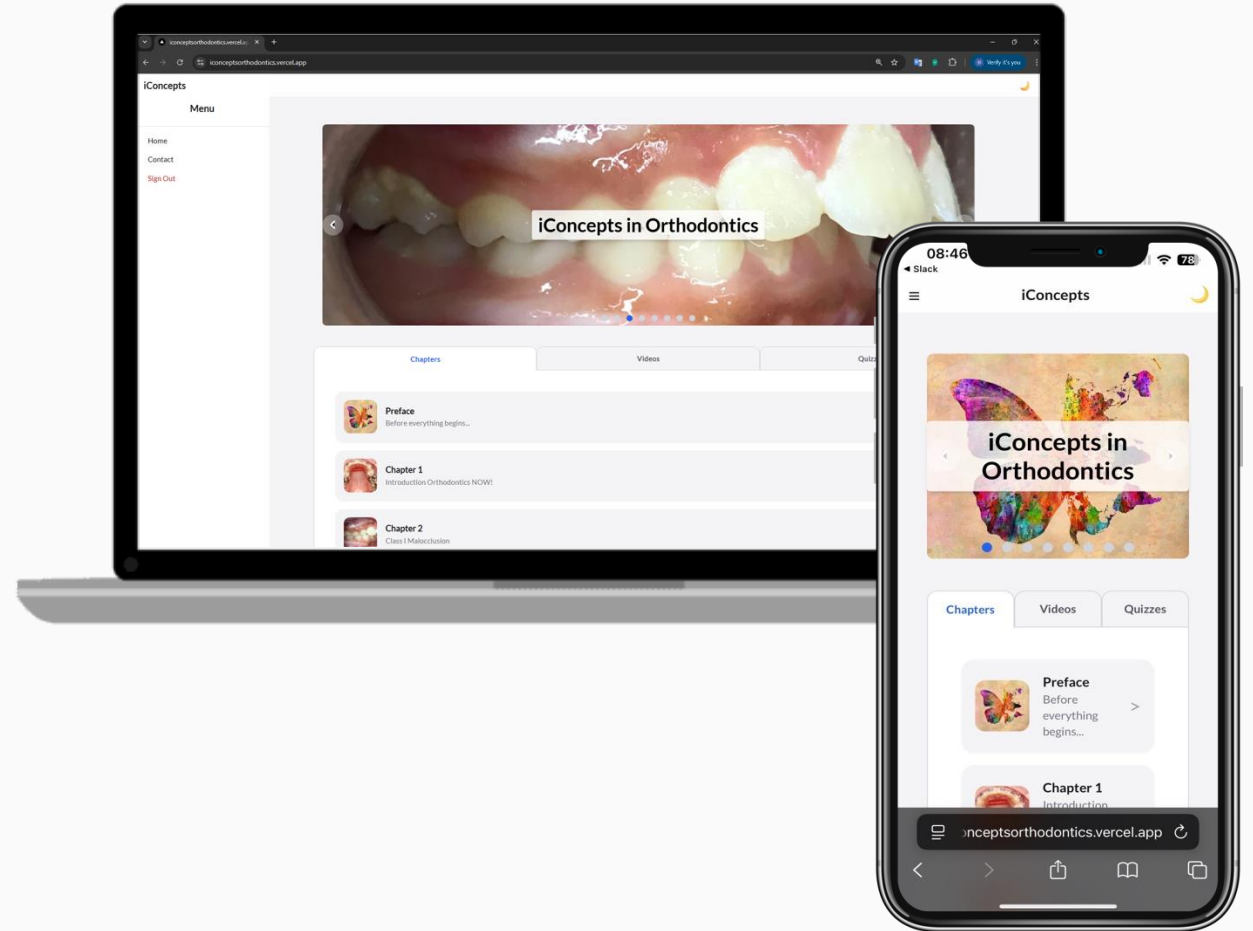


Final Product - Overview

iconceptsorthodontics.vercel.app

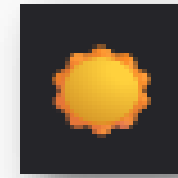
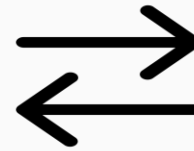
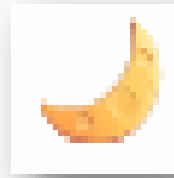
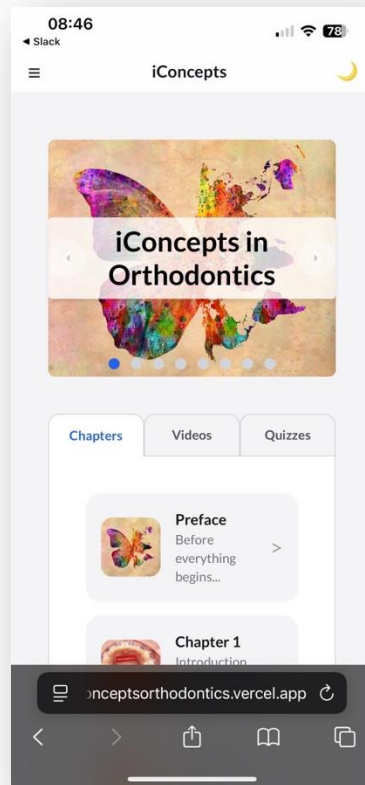
Access through on Mobile/PC

Login/Register with email

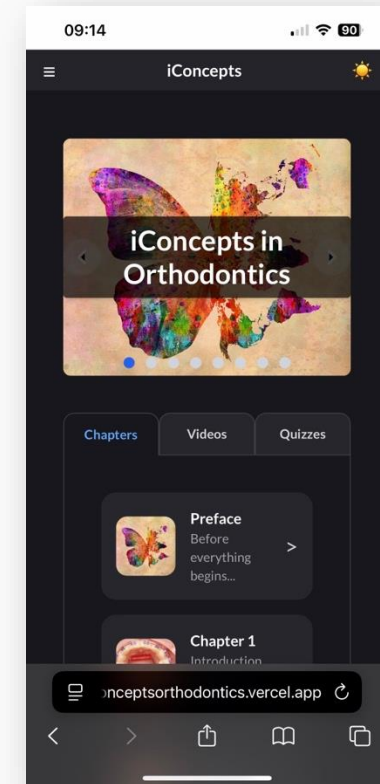


US 4.1 - Dark mode feature

"Students' study habits and environments vary across the world. It's likely for students to be studying under a low-light surrounding, or perhaps during late night. The bright interface could cause discomfort after long usage. The application now offers a dark mode option for users to change their display settings based on their preference."



Dark mode button located on the top-right of the page



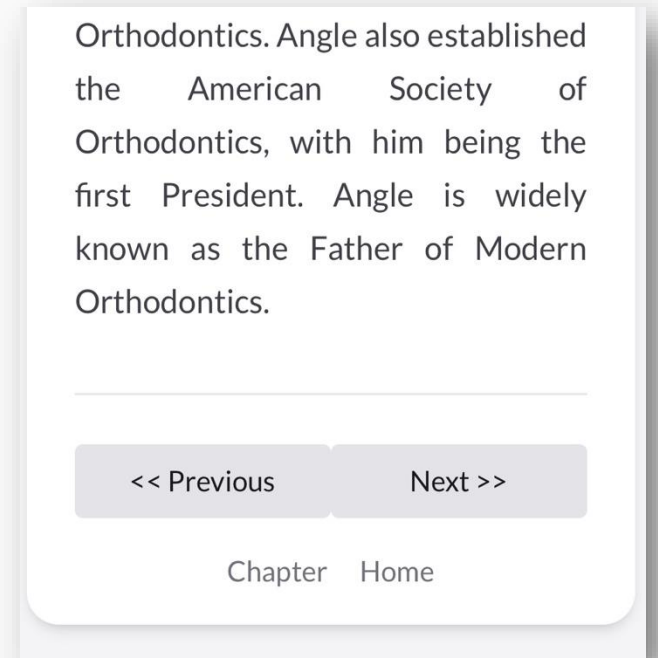
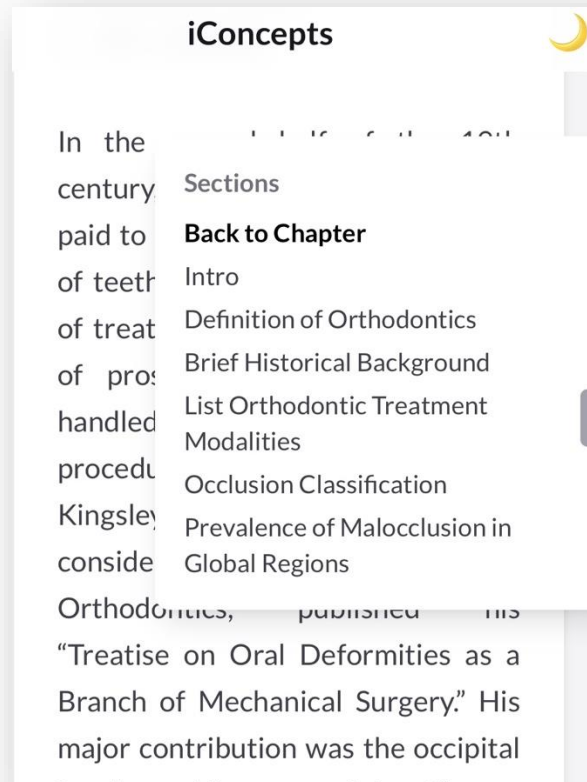
US 4.2 - Table of content and navigation-button

"Students are having a quick review 10 minutes before a quiz. They want to revisit a specific section that was just read through for deeper understanding. Scrolling through a long page or re-navigating from the home page is time-consuming. An efficient feature to enhance navigation between chapters can improve learning experience"

TOC button on the right side

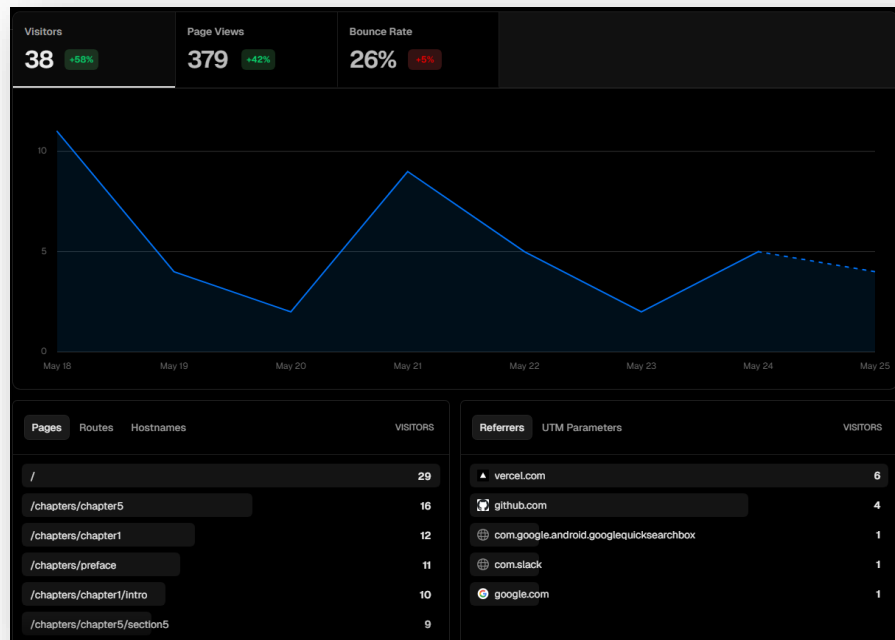
Previous/Next button

Page direct button



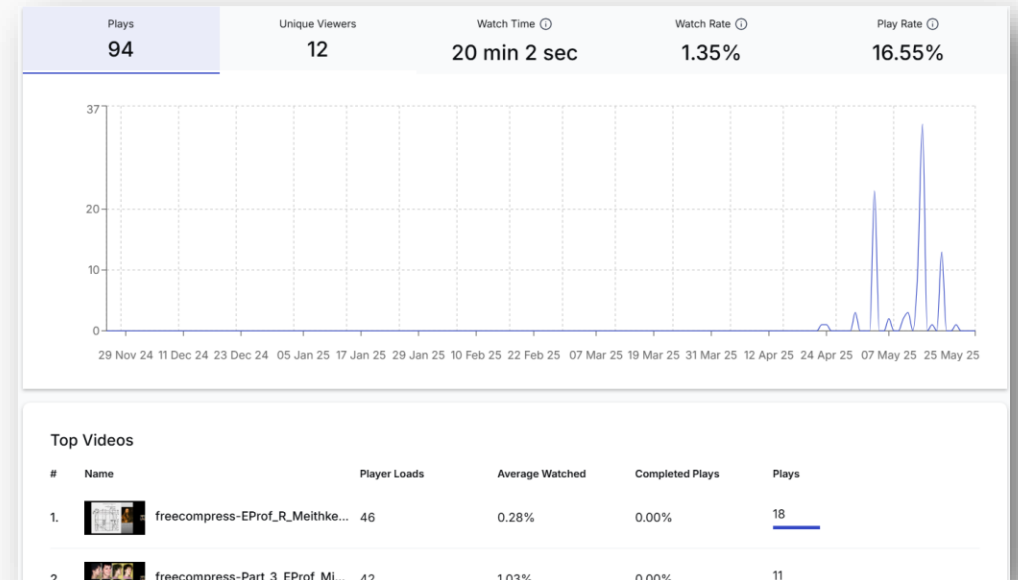
US 3.1~3.4 - Website Analytics

"The educator has published the textbook, and would like to evaluate how well each piece of content performs. With visitor click counts for each chapter and audience location etc., the lecturer can decide whether to refine materials, and understand the effectiveness of the textbook."



Vercel Analytics:

<https://vercel.com/ic-redbacks-projects>

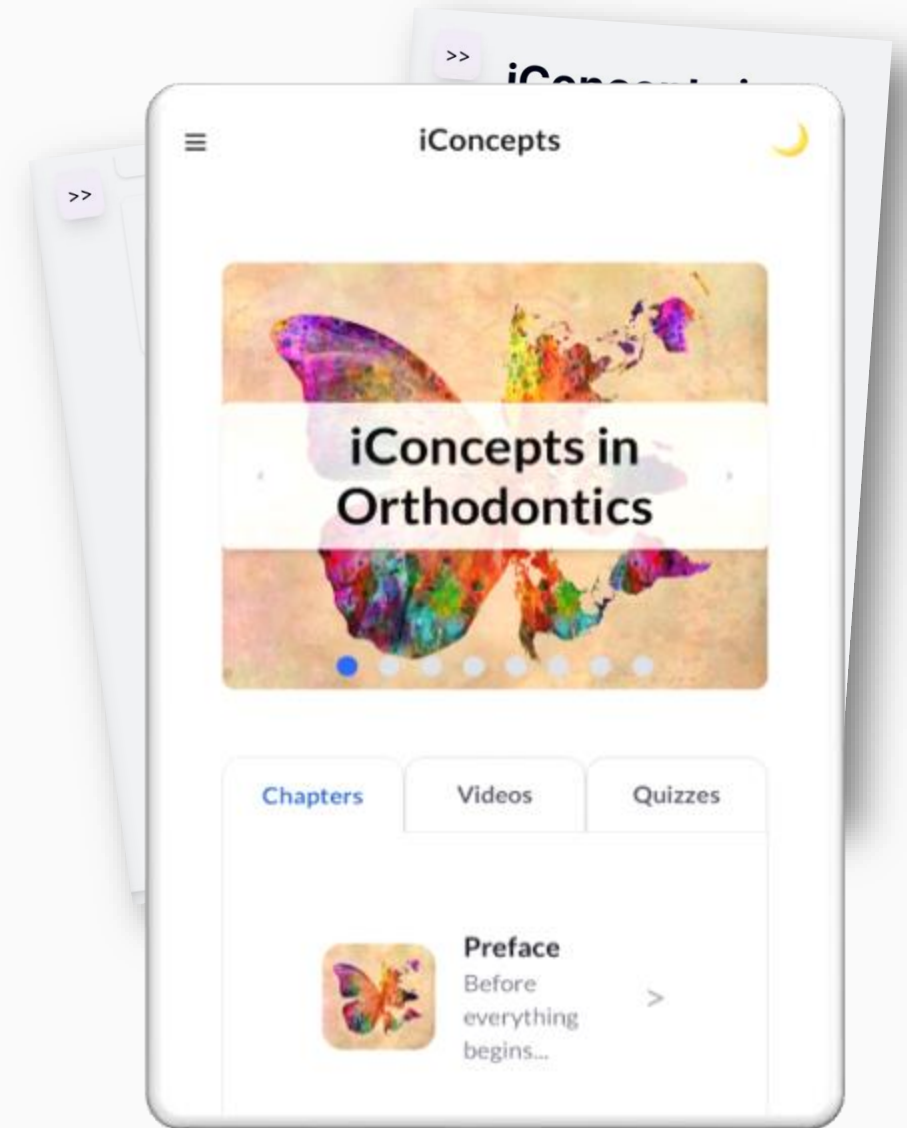


Cloudinary Analytics:

<https://cloudinary.com/users/login>

Redesigned User Interface

"In the previous homepage design, chapter thumbnails took up significant space, forcing users to scroll down to access videos and quizzes. The new UI introduces a gallery carousel and separate navigation tabs to improve accessibility and streamline user experience."



Tabs and Gallery Carousel

Reflection – Sprint 2 & 3



| Sprint 2 - Goals

Integrating the existing features and content to the newly designed textbook for usability enhancement.



Display correct and complete context



Improve video loading time



Update more chapters



Adjust font size



Ensure elements are aligned on mobile device



Fix broken images and videos



Update interactive quizzes



Enable dark mode

| Sprint 2 – Review

Completed tasks

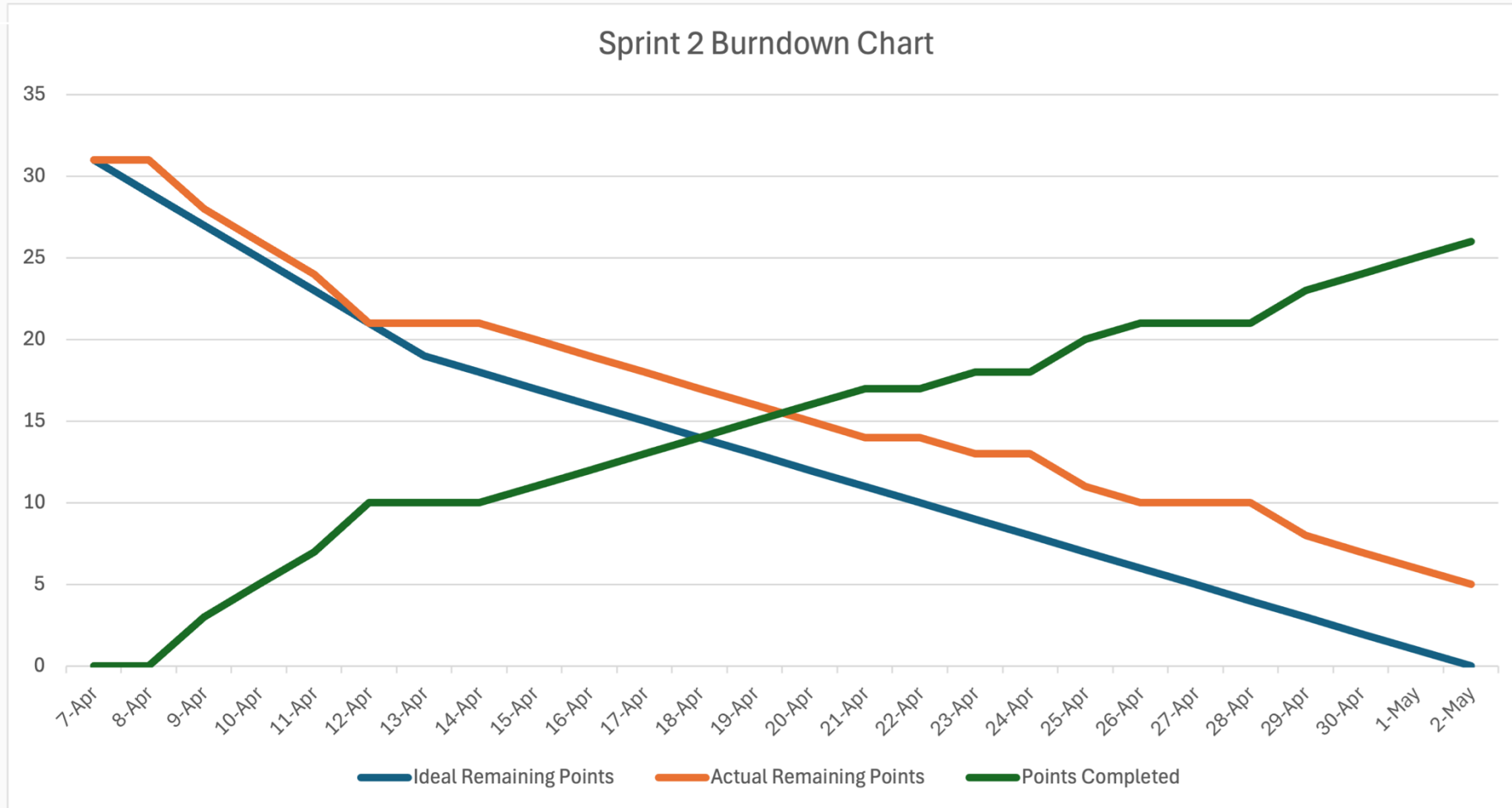
- Designed a clean and concise UI
- Organised the content into 3 tabs
- Large files were stored in and fetched from Cloudinary
- Implemented interactive components in videos locally
- Added dark mode feature
- Modified content alignments

Incomplete tasks

- Add new chapters' content to the textbook
 - Unable to receive the required materials from our client on time
- Adjust font size to enhance users' usability
 - Consider that the existing zoom in and out function on the browser provides better representation

Sprint 2 – Burndown chart

Completed 26 / 31 story points, 5 story points remained



| Sprint 3 - Goals

Add more chapters and provide analytics information for administrator to extract insights.



Update 3 more chapters



Analytics function - record views of chapter pages



Analytics function - understand website traffic



Analytics function - track the browsing time of each page



Add table of content



Resolve errors found in sprint 2

| Sprint 3 – Review

Completed tasks

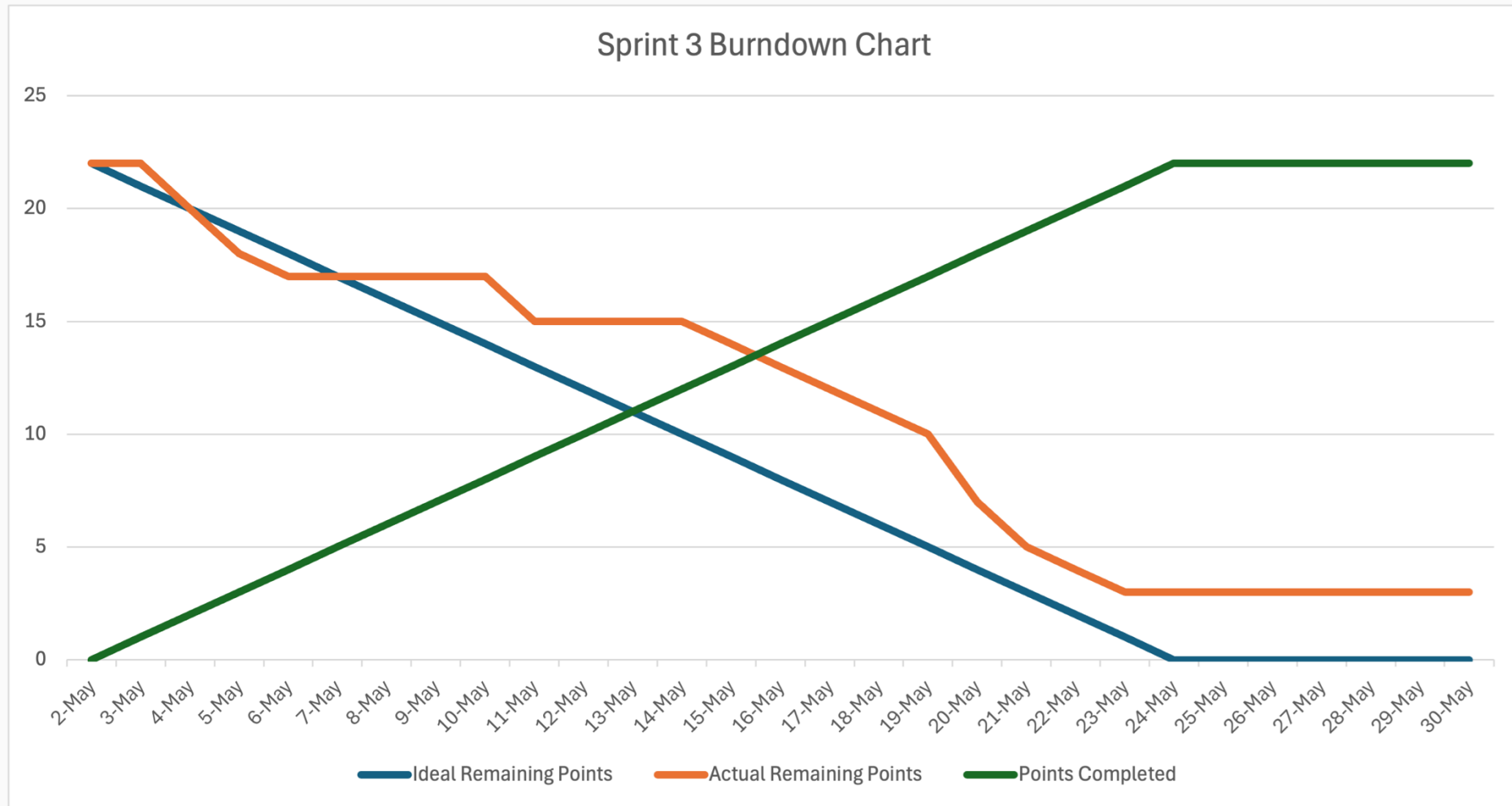
- Added contents and ensured chapters are up-to-date
- Cloudinary video analytics dashboard
- Vercel chapter analytics dashboard
- Added “Contact” and “Privacy & Copyright” page
- Conducted cyber security checks and fixed some potential risks
- Table of Contents navigation within chapters

Incomplete tasks

- Tracking the browsing time of each page
 - Already met core client’s need with minimal risk and payment
 - Advised by client at a later phase
 - Finished all in-scope tasks earlier and tried different approaches
 - Infeasible due to zero budget

Sprint 3 – Burndown chart

Completed 19/22 story points, 3 story points remained



| Out of Scope Features

Existing zoom- function is enough

Font Size

Real-time
User Data
Analysis

Increasing webpage loading time

Key Outcomes

WHAT WENT WELL?

Sprint 2

- **Collaborated** smoothly as a team for efficient workflow
- Integrating new solutions to existing functions successfully
- Most user stories were **completed** and **satisfied** the client's needs

Sprint 3

- **Completed** all user stories and modified the features based on the client's feedback
- Effective verbal and written **communication** between the team and the client

WHAT COULD HAVE GONE BETTER?

Sprint 2

- Ask for the materials required for implementation earlier from the client and **remind her regularly**
- Familiarise with the application structure built by the previous team
- **Track project progress consistently** to avoid missing tasks

Sprint 3

- During demonstration, the terms used for explanation should not be too **technical**
- The structure of wiki documentation should be better **organised** and the content should be more **elaborative on reasoning** each decision made

Key Outcomes

ACTION ITEMS

Sprint 2

- Catch up with our client **every 2 weeks** and send reminder email **3 days before** client meeting
- Start the next sprint **earlier** and follow the project timeline closely

Sprint 3

- Prepare for **clear and concise manual** for client to understand the usage of the application, Vercel analytics dashboard, and Cloudinary storage and video analytics platform
- **Double check** and ensure the written details of the wiki documentation before submission

WHAT DID WE LEARN THROUGHOUT THE PROJECT?

Sprint 2

- **Timely communication** is crucial in keeping the project on track
- Promote **knowledge sharing** and **onboarding practices** to reduce the learning curve for new features or legacy work.

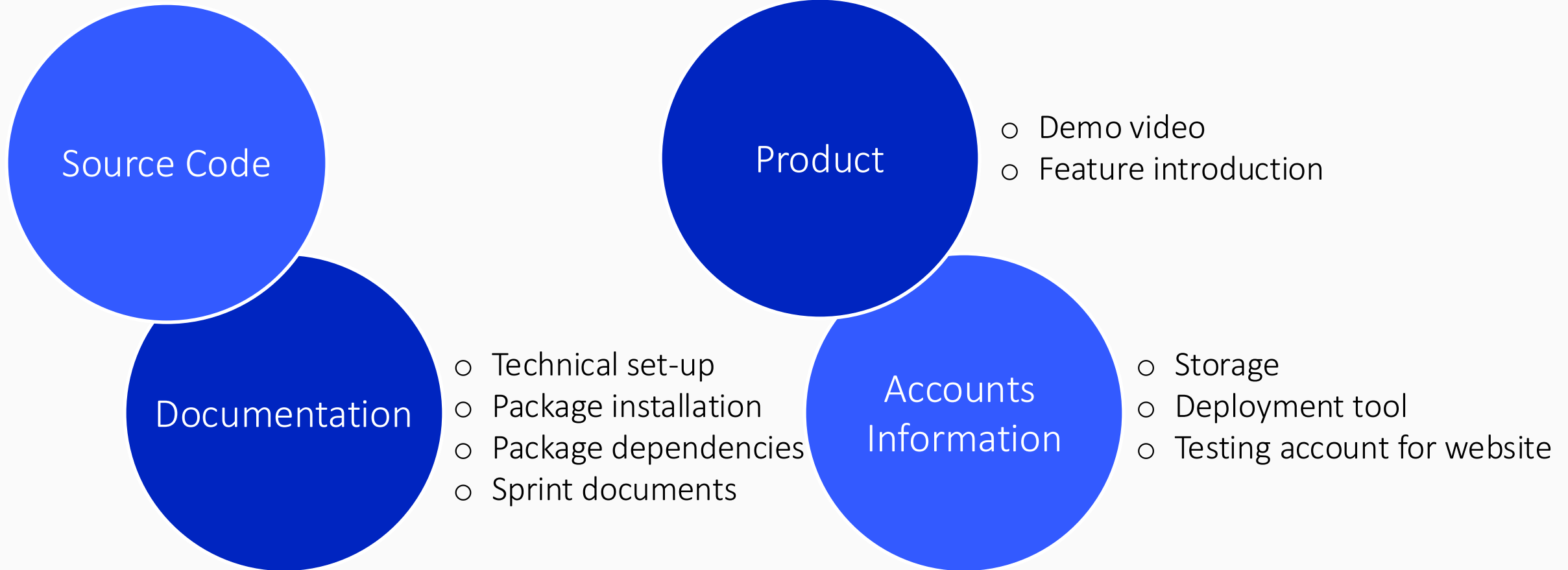
Sprint 3

- Logical **negotiation** with the client is allowed to provide a high-quality product
- **Professional Delivery = Good Product + Good Documentation**

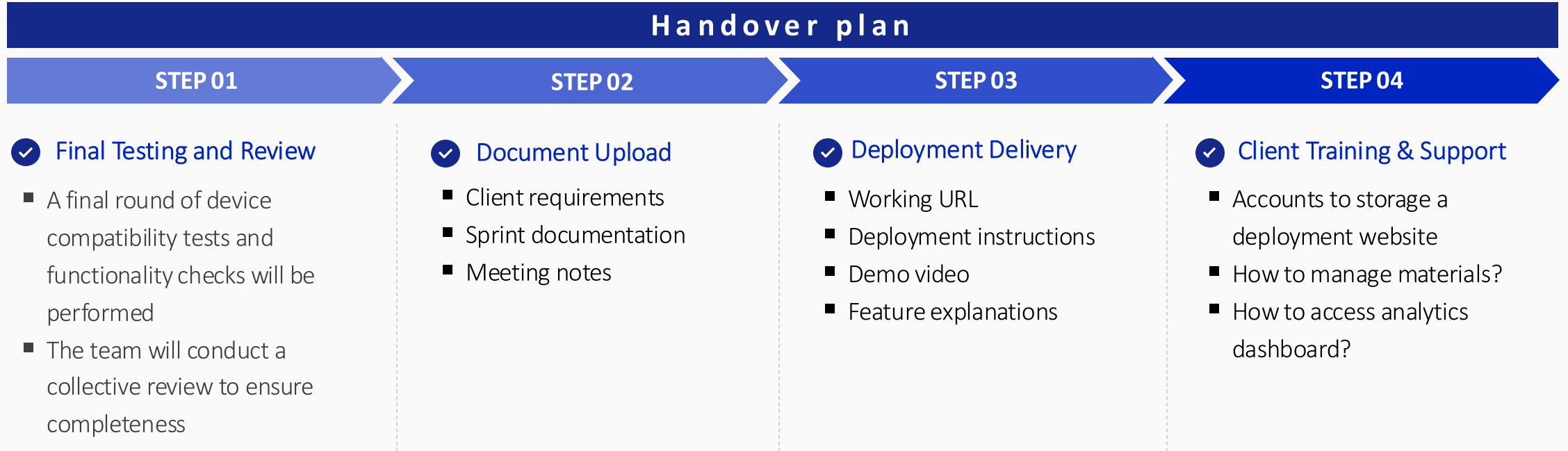
An isometric illustration of a digital workspace. It features several floating screens and data visualizations. On the left, a screen shows a list of user profiles. In the center, a large donut chart is divided into four colored segments. To its right, a screen displays a calendar with a red checkmark in one of the dates. Further right, a screen shows a line graph with a red line trending upwards. In the bottom left, a person is interacting with a screen that has a red button. Below the donut chart, another screen shows a line graph with a green line. In the bottom center, a screen displays a bar chart with three bars of increasing height. To the right of that, a screen shows a line graph with a red line. In the bottom right, a person is standing on a stack of three blue blocks, looking at a screen that displays a line graph. The entire scene is set against a dark blue background with a subtle grid pattern.

Final Release & Handover Plan

| What will be included?



How to handover?



Addressing risks during handover with clear distinction between developer and client document to avoid miscommunication

Thank you!

