

Rune Featherston - WAPH Project 1 Report

Course: Web Application Programming and Hacking (WAPH)

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Figure 1: Headshot

Overview

This project involved building a professional portfolio website hosted on GitHub Pages that showcases my background, skills, and project experience, particularly from the Web Application Programming and Hacking course. The assignment required combining front-end development, JavaScript interactivity, public API usage, cookie-based session recognition, and professional design practices. Through completing this, I deepened my fluency in web technologies and strengthened my full-stack engineering toolkit.

Live Website: <https://rune featherston.github.io>

GitHub Repository: <https://github.com/RuneFeatherston/RuneFeatherston.github.io>

Task Completion Summary

1. Personal Website Creation

- Built a responsive, mobile-friendly personal portfolio in `index.html`
- Included name, 150x150 headshot (just a general photo of me, hope you don't mind!), email, phone number, GitHub link, and education/work background
- Embedded a downloadable resume
- Added a visually styled featured project section
- Created a separate page (`waph.html`) introducing the WAPH course and my related work

Fit Criterion Met: All content required for a professional profile is present and formatted cleanly.

2. WAPH Course Link Page

- Created `waph.html`, a standalone page highlighting course objectives, tools, labs, and hands-on projects
- Added a “Fun Corner” section demonstrating interactive features from Lab 2
- Included internal link navigation and return-to-home functionality
- I want to note, I put all of the clocks and API related stuff in the `waph.html` instead of `index.html` so that the main page looks cleaner. This is hopefully so that employers have a more positive view on it.

Fit Criterion Met: Clear project linkage.

3. Styling and Layout with CSS Framework

- Used **Bootstrap 5.3.0** for layout and responsiveness
- Customized typography using **Google Fonts (Poppins)**
- Applied additional custom styles for hover effects, dark mode toggle, and responsive scaling

Fit Criterion Met: Open-source styling used; design is modern and visually consistent.

4. JavaScript Interactivity

a. Digital Clock - Implemented in `waph.html` using `Date()` and `setInterval`
- Displays live system time, updates every second

b. Analog Clock - Circular clock with rotating hands via CSS transforms -
Synced with the digital clock logic

c. Show/Hide Email - Toggle implemented using jQuery class manipulation -
Accessible from homepage via “Contact Me” button

d. Extra Feature: Theme Toggle - Allows switching between dark and light
modes - Persisted across session

Fit Criterion Met: All required functions plus one custom addition included
and functional.

5. Public API Integration

JokeAPI Integration - Fetches a new joke every 60 seconds - Displays in
`waph.html` with visible disclaimer - Fallback error message on failure

XKCD Comic Integration - Loads comic image, title, and alt-text - Uses
CORS proxy for API compatibility - Error-resilient and styled for readability

Fit Criterion Met: Two APIs integrated with dynamic content and responsible
handling.

6. JavaScript Cookies

- First-time visit triggers welcome message
- Returning visitors shown timestamp of last visit
- Stored using custom `setCookie()/getCookie()` functions
- Message dynamically rendered on homepage

Fit Criterion Met: Cookie-based tracking implemented with correct condi-
tional behavior.

7. Page Tracker Integration

- Used **FlagCounter** for visual country-based analytics
- Also included Google Analytics snippet for detailed tracking (placeholder
ID)

Fit Criterion Met: Third-party tracking tools are active and visible.

Learning Outcomes

With this lab, I gained hands-on experience with JavaScript timers, DOM updates, and API calls. A new thing I learned was specifically cookie management and session handling on the client-side. I also hopefully learned how to have improved layout design using CSS frameworks and responsive techniques, last website I made looked like it was straight out of the 80s, this should be better.

Professional

- Practiced full-stack development within a constrained, deadline-driven project
 - Developed clearer documentation and project structure habits
 - Explored how to package technical work for public, employer-facing presentation
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Challenges and Solutions

Challenge	Solution
CORS restrictions with XKCD API	Used AllOrigins proxy
Synchronizing analog + digital clocks	Derived angle math and synced intervals
Cookie persistence between sessions	Set expiration and updated time formatting
API failure resilience	Added graceful fallback UI messages
Balancing aesthetics with functionality	Modularized features and styled consistently

Submission Artifacts

- PDF Report: `rune-featherston-waph-project1.pdf`
- Website URL: <https://rune-featherston.github.io>
- GitHub Repo: <https://github.com/RuneFeatherston/RuneFeatherston.github.io>