



Technical report

“DUGNAD”

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D U G N A D



*The word "dugnad" originates from the Old Norse *dugnaðr*, meaning "help" or "support." Today, it defines a Nordic tradition of coming together as a community to share labor, uniting individuals through acts of selfless giving.*

Dugnad is a digital space rooted in the Norwegian spirit of community—where people come together to help, uplift, and share their strengths.

This site is a response to the need for genuine connections in today's world, creating a platform where people can freely exchange time, skills, and support without the expectation of financial gain. It's a movement to foster unity, where each contribution serves as a building brick in the community.

Connection: Dugnad connects people who believe in the power of collaboration. By bridging skills and needs, it's a place where individuals not only help each other but also cultivate friendships.

Trust: Dugnad breathes the idea that everyone has something valuable to offer. Each act of help strengthens the community, creating a culture of mutual care and commitment to others.

Empowerment: Dugnad empowers users to give and receive in a meaningful way.

Including: Either if someone needs help with a daily task or wants to share their expertise, Dugnad's platform is open to all and all contributions are valued.

1. Design and identity

When designing for Dugnad I aimed for a minimalistic aesthetic grounded in nordic simplicity and warmth.

To craft a cohesive and engaging visual experience, I explored a range of concepts, colors and ideas to end up capturing the full, complete essence. The resulting color palette reflects a thoughtful selection process, rooted in muted, rich, and elegant tones of blue as found in the northern mountain scenery. Each color was chosen to enhance the overall aesthetic and bring a sense of harmony to the design.

For contrast and warmth I decided on a warm, oker yellow tone to stand out against the sophisticated blue tones, but also to create a more inviting, warm space for the user.

The font Lora was chosen for its elegant, yet mystic feel. I wanted to maintain the Norse essence while staying true to my mission of a modern, minimalist design, reflecting Scandinavian design principles.

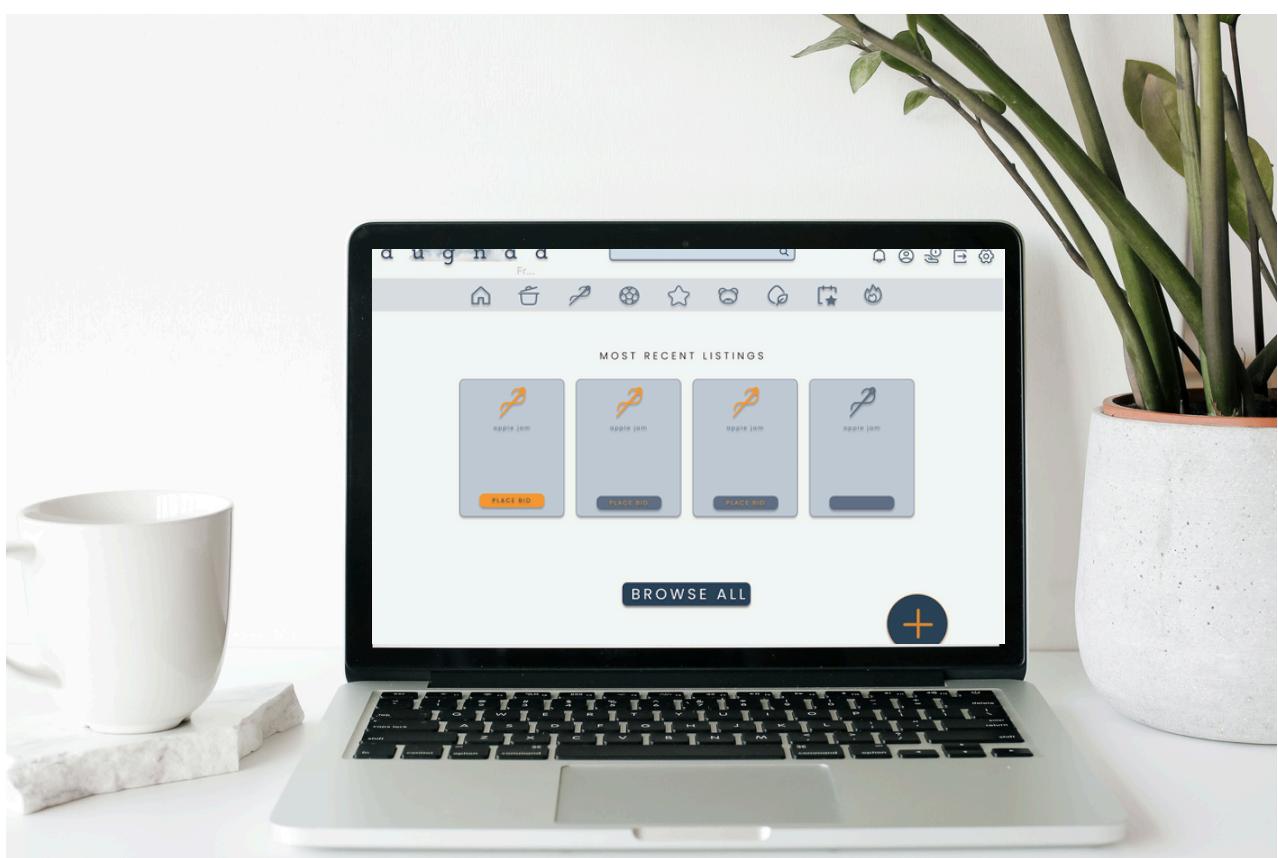
The design's central visual theme features mountain silhouettes in muted tones, symbolizing both the strength and resilience of community and serving as a steadfast symbol of the North. These steady, calm blue tones sources a sense of peace and reliability, while the mustard color brings a touch of warmth that creates an inviting and balanced visual experience.

primary light	#788da4
primary default	#3c556e
primary dark	#25334a
secondary light	#fada5e
secondary default	#fffbf00
secondary dark	#D19400
bg	#F4F6F5



The design process was time-consuming and required several iterations to ensure user-friendliness and consistency. We chose soft icons in the primary blue color palette to create a clean, welcoming interface. Each icon was uniquely designed in Canva to represent key features and categories, balancing simplicity and clarity. The final designs were exported and optimized to align with the Dugnad platform's core values.





Target audience

Dugnad is a platform for individuals and communities seeking mutual support, skill-sharing, and meaningful connections. It caters to diverse groups, including local communities looking to strengthen bonds, students and young professionals exchanging skills and time, and volunteers contributing to shared efforts. By bridging gaps in access to skills and services through a user-friendly, credits-based system, Dugnad fosters inclusivity, trust, and collaboration across different backgrounds.



Busy Parent

- Age: 35
- Motivation: Needs help with childcare or errands due to a demanding work schedule, offering graphic design or event planning skills in return.
- Needs: Reliable assistance with family tasks, safe connections, and a way to balance work and life.



Student

- Age: 21
- Motivation: Wants affordable help with moving apartments or occasional repairs in exchange for offering her own skills, such as tutoring or language lessons.
- Needs: Low-cost or free services, trustworthy local connections, and flexible opportunities to earn credits.



Retiree

- Age: 67
- Motivation: Enjoys staying active and sharing his skills in woodworking and home repairs while seeking help with technology.
- Needs: A platform to share his experience, receive tech assistance, and engage socially.

2. Technical specifications

Scope

- Building an interactive and responsive user interface.
- Integrating the front-end with the provided API to manage user authentication, listings, and bidding functionality.
- Ensuring smooth navigation and usability across devices.

Planning:

- Trello for task management with Kanban-style boards.
- Gantt Chart for tracking milestones
- Tasks were broken into phases (design, development, testing).
- Frequent checking alignment with the brief.

Project Structure

File Organization:

- HTML: Pages like index.html, profile.html, about.html for core functionality.
- Tailwind CSS for styling
- Modularized JavaScript: Separate modules for called into main for execution

Key Technologies

- Tailwind CSS: For static assets, responsive design, and clean UI styling.
- JavaScript (ES6+): Handles dynamic functionality, including API integration and interactivity.
- API Communication:
 - CRUD operations (Create, Read, Update, Delete) are performed via asynchronous fetch calls.
 - Example:
 - Create: Submitting new listings.
 - Read: Fetching listings, bids, and user profiles.
 - Update: Updating user avatars.
 - Delete: Removing outdated listings.

SP2

❯ : Done ⚡ : On-going ➔ : Upcoming

46 | 47 | 48 | 49 | 50

Planning

Kanban board

Gantt chart

Design & prototype

Concept development

Visual profile

Wireframes and mockups

Prototype Figma

Development

Set up repo

Set up base and install dependencies

Login / New user

Feed

User profile

Add listing / bidding

Final styling

Finalizing

Testing and quality

Readme

JSdocs

Report

Deploy & submit

11/11-13/11

❯ Kanban board

❯ Gantt chart

11/11-13/11

➔ Concept development

➔

➔

➔

➔

: 12/03-18/03

➔

➔

➔

: 12/03-28/03

➔

➔

➔

Key Features and Front-End Requirements

User Authentication

- What It Does:
 - Users can register with a valid stud.noroff.no email address.
 - Users can securely log in and log out.
- Front-End Requirements:
 - Registration Form: Validate user input and make an API call to register the user (POST /auth/register).
 - Login Form: Handle user credentials and fetch authentication tokens (POST /auth/login).
 - Logout: Invalidate tokens locally and redirect to the login page.

User Profile

- What It Does:
 - Users can update their profile avatars to personalize their accounts.
 - Users can view their total credit balance.
- Front-End Requirements:
 - Avatar Update: Implement a file upload feature that calls the API to update the user's avatar (PUT /user/profile).
 - Fetch Credits: Display the user's current credit balance using an API call (GET /user/credits).

Listings Management

- What It Does:
 - Users can create auction listings with the following details:
 - Title
 - Deadline date
 - Media gallery (images)
 - Description
- Front-End Requirements:
 - Create Listing Form:
 - Build a form with fields for the required details.
 - Upload images using the API and attach them to the listing (POST /listings).
 - Validation: Ensure the title, description, and deadline are valid before submission.

Bidding System

- What It Does:
 - Users can place bids on other users' listings.
 - Users can view all bids made on a specific listing.
- Front-End Requirements:
 - Place Bid:
 - Add a bidding form on each listing's detail page.
 - Make an API call to submit the bid (POST /listings/{id}/bids).
 - Fetch Bids: Display all bids for a listing on its detail page (GET /listings/{id}/bids).

Search Functionality

- What It Does:
 - Non-registered users can search and browse through listings.
- Front-End Requirements:
 - Search Bar:
 - Implement a search input that dynamically fetches listings (GET /listings?search={query}).
 - Filter Results: Allow filtering by categories or other criteria.
 - Pagination: Handle large datasets efficiently.

3. Developmental process

The development process for Dugnad was a journey of trial and error, paved by challenges that tested both technical skills, problem-solving abilities as well as mentality. One of the key takeaways was discovering that simplicity often leads to more robust and maintainable solutions.

Struggles with Complexity

Initially, some features were approached with too much bravery which resulted in a logic too complex, this quickly became difficult to manage and scale. For example, managing dynamic updates across the bidding system introduced issues with consistency and responsiveness. The quick solution was an extra function to sort of bidding button chaos in the midst of a complexity-chaos. I was aiming for functionality working at this point.

API Overload Challenges

Another challenge was working with the API, especially during periods of heavy usage. Too many calls to the API occasionally caused delays or errors that was sometimes hard to understand. This caused me to restructure my logic a handful of times before realising the problem wasn't for once on my end.

Simplifying for Maintainability

Through these struggles, I learned that maintaining simplicity in design and implementation is critical in order to ensure robustness all over. By breaking down complex features into smaller, reusable components, the codebase became easier to manage and debug. This mindset I will definitely bring with me forward in the process.

Enhancing User Engagement

Strategic use of Call to Action (CTA) buttons improved engagement. Buttons like "Browse All", "Sign Up Now", and "Place Bid" were designed with clarity and visibility, guiding users seamlessly through key actions.

Category Bar for Accessibility

To enhance navigation, the category bar remains persistent on larger screens and toggles via a mobile-friendly hamburger menu on smaller devices. This design provides users with quick access to relevant sections without cluttering the interface.

4. Testing

Testing was a vital part of the Dugnad development process, especially since the platform required many different functions and actions all together. I aimed to ensure a platform that functioned smoothly, provided a user-friendly experience, and met the goals set out in the project brief.

A combination of manual testing and user behavior tracking through Hotjar was used to identify issues, gather insights, and refine the final product.

Manual Testing

Throughout the development cycle, extensive manual testing was conducted to verify that each feature worked as intended.

Final User Testing

While there were challenges during user testing—such as technical issues with deployment or recording tools—the overall feedback provided valuable insights into the site's flow and usability. The participants were able to navigate key features, such as the category bar, bidding process, and call-to-action buttons, without major friction. This confirmed that the design and structure successfully guided users through the intended flow, ensuring a seamless experience.

5. Key Challenges and next steps

Challenges

1. API Integration Difficulties:
2. Issues with managing asynchronous API calls and handling edge cases (e.g., invalid user inputs).
3. Bidding Functionality Troubles:
4. Setting up dynamic updates for bids while ensuring consistency across devices.
5. Responsive Design:
6. Balancing Tailwind's utilities with custom design tweaks for mobile and desktop compatibility.
7. Time Management:
8. Managing multiple deliverables like the Gantt chart, style guide, and hosted demo was challenging.

Lessons Learned

- Simplify for Robustness: Learned to prioritize simplicity to build a more reliable system.
- Personal Investment: Realized that being personally invested in a project fuels motivation and leads to better outcomes, especially during exam periods.

Future improvements

- Code Cleanup:
 - Refactor and optimize the existing codebase for better maintainability.
- Needing Help Functionality:
 - Add a feature to allow users to request help directly from others.
- Notifications:
 - Implement real-time notifications for bids, wins, and listing updates.
- User Reviews:
 - Enable users to leave reviews for completed listings to build trust and credibility.

7. Conclusion

Dugnad is more than a technical school project, it's a project that also reflects a personal philosophy of mine combined with something I'm scared to see less and less of in our world; community, trust, selfless care and giving of our own time and efforts. Inspired by my home, Norway, it felt natural and close to heart to build the concept around such a unique cultural heritage.

The journey of building Dugnad was filled with challenges, from grappling with complex API integrations to ensuring a seamless user experience across devices. It was more than just a technical journey, but definitely also another lesson in resilience and the power of giving it another go. Along the way, we learned that simplicity is not just a design choice but a path to clarity, solid and robust code.

Ultimately, Dugnad is more than lines of code or neatly styled pages. It's a digital embodiment of a timeless value: the strength found in shared effort. This project not only fulfilled its technical goals but also carried the heart of its mission—to inspire collaboration, empower individuals, and create a sense of belonging within a community.

As Dugnad moves forward, its foundation is strong, and its future holds exciting opportunities for the future.