



CHRIST

(DEEMED TO BE UNIVERSITY)

BANGALORE • INDIA

Wardrobe Wizard

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Software Requirements Specification for Wardrobe Wizard

1. Problem Definition

Managing a personal clothing inventory can be a daunting task, especially for those who own a large number of clothes. It's not just about keeping track of what you have, but also organizing them in a

way that makes sense to you. It's easy to lose track of what you own and end up buying more of the same thing or forgetting about items you already have.

Furthermore, with changing fashion trends and evolving personal style, it's important to regularly assess your wardrobe and make decisions on what to keep, donate, or sell. This process can be time-consuming and overwhelming without the right tools. That's where a dedicated mobile application comes in handy.

With features such as inventory tracking, outfit planning, and donation/selling options, a clothing management app can simplify the process and save you time and money and also help us make better use of our clothes in a sustainable way.

2. Requirement Specification

2.1 Functional Requirements

The functional requirements of the Wardrobe Wizard app are:

- **Inventory management:** The user can add, edit, delete, or view their clothing items in their inventory. The user can also categorize their clothing items by type, color, pattern, season, occasion, etc.
- **Outfit recommendation:** The user can request outfit suggestions from the app based on their preferences. The app will use machine learning algorithms to generate three outfit options for each request. The user can rate each outfit option by liking or disliking it. The app will learn from the user's feedback and improve its recommendations over time.
- **Outfit planning:** The user can plan their outfits for different occasions using the app. The user can select an occasion from a predefined list or create their own custom occasion. The app will suggest outfits based on the occasion and the user's preferences. The user can save their planned outfits in a calendar view and set reminders for them.
- **Fashion discovery:** The user can discover new fashion trends using the app. The app will show the user popular outfits from the Polyvore dataset or other online sources. The user can browse through different categories of outfits such as casual, formal, seasonal, etc. The user can also search for specific outfits using keywords or filters.
- **Donation/selling:** The user can donate or sell their unwanted clothing items using the app. The app will provide information on nearby donation centers or online platforms where the user can donate or sell their clothing items. The app will also track the user's donation or selling history and provide feedback on their environmental or social impact.

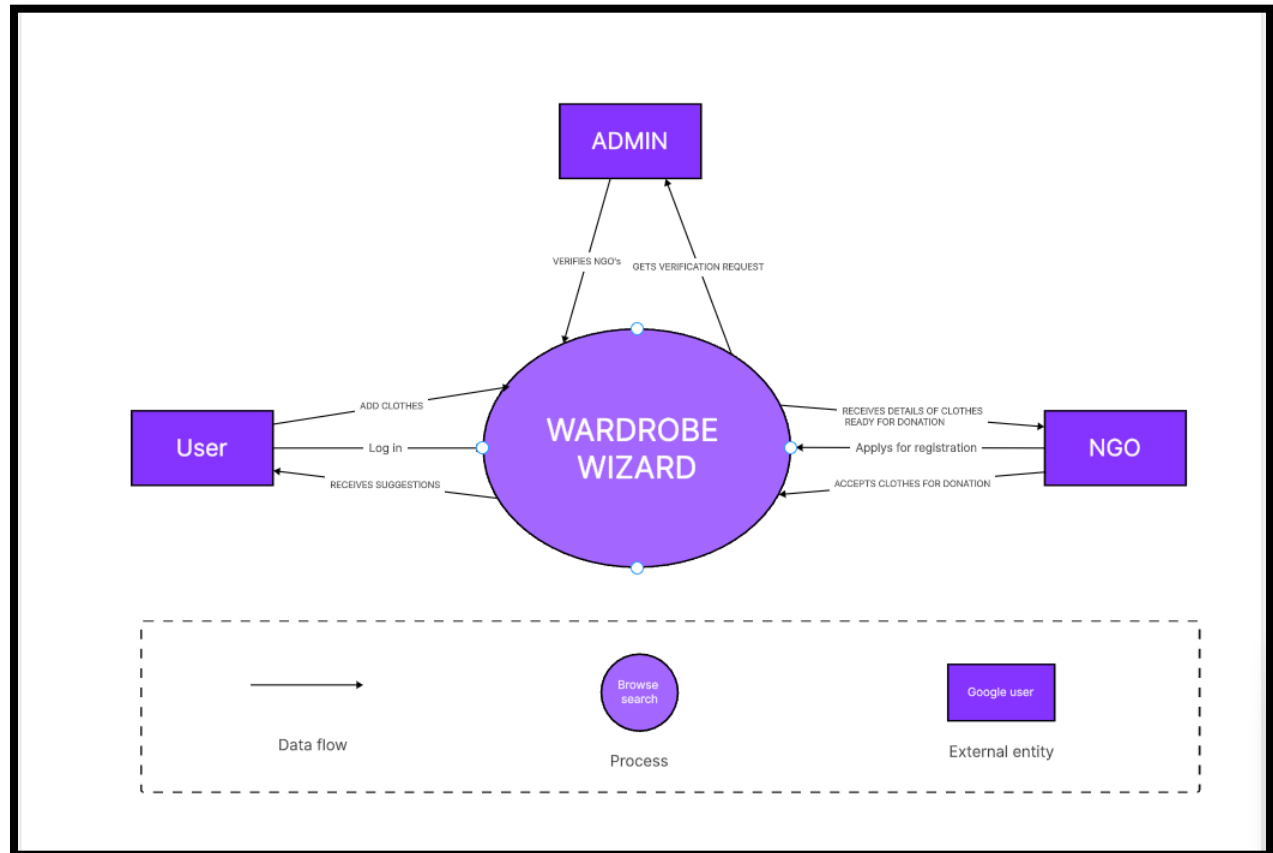
2.2 System Requirements

The system requirements of the Wardrobe Wizard app are:

- **Hardware requirements:** The app will run on Android devices with internet access.
- **Software requirements:** The app will use Firebase for data storage and authentication, Google Cloud Platform for machine learning processing and hosting APIs, and Dataiku for creating machine learning models.
- **Interface requirements:** The app will have a user-friendly and intuitive interface that follows the design guidelines of Android platform.
- **Communication requirements:** The app will communicate with Firebase, Google Cloud Platform, Dataiku, and third-party services using RESTful APIs and JSON format.

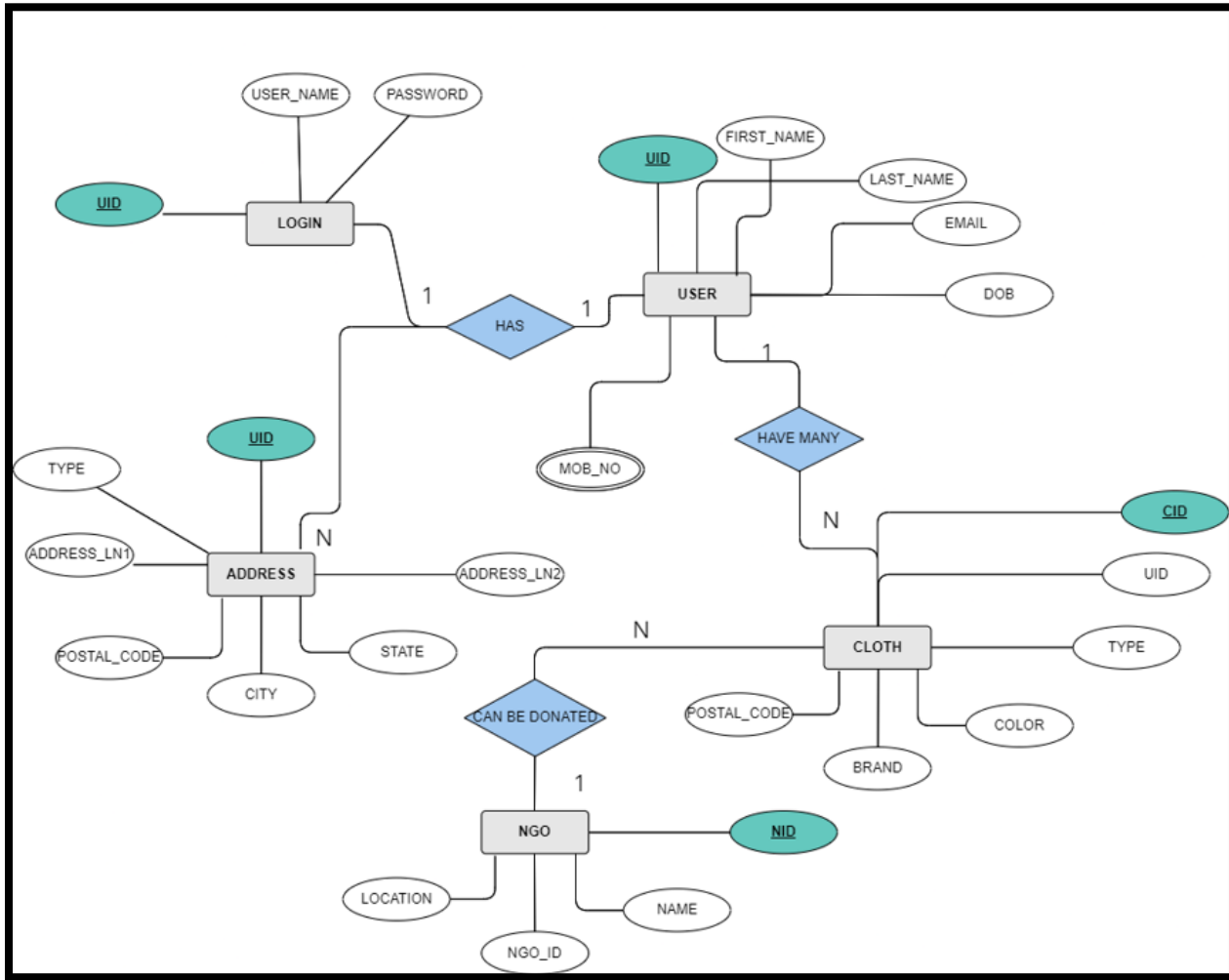
3. Conceptual Model

3.1 Data Flow Diagram

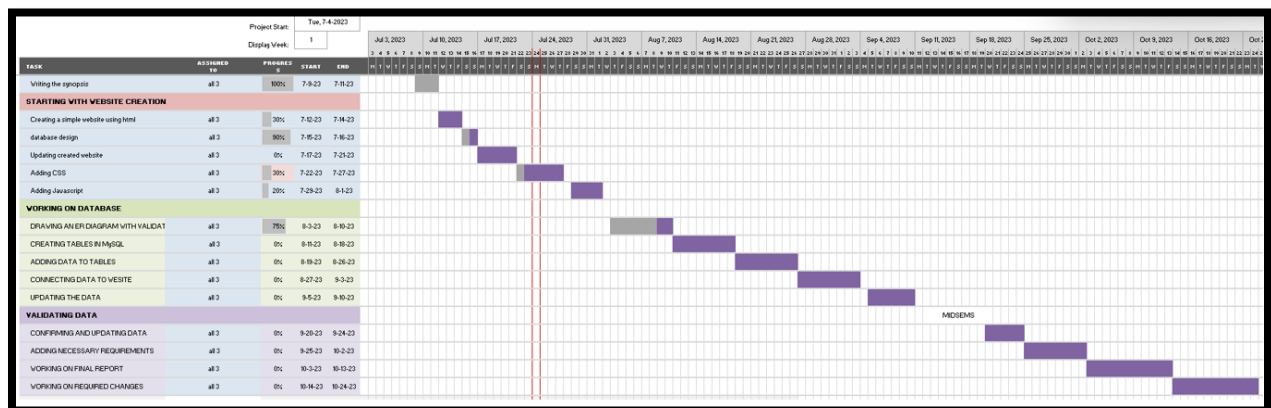


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3.2 ER Diagram



3.3 Gantt Chart



3.4 PERT Chart

4. Proposed Tools

The proposed tools for the Wardrobe Wizard mobile application are based on the software development life cycle (SDLC) phases and activities that include analysis, design, implementation, testing, deployment, and maintenance.

Analysis Tools

The analysis tools are used to gather and analyze the requirements of the system. The proposed analysis tools for the Wardrobe Wizard mobile application are:

- **Surveys:** Surveys are used to collect data from a large number of users and stakeholders about their preferences, opinions, and satisfaction.
- **Questionnaires:** Questionnaires are used to collect structured data from a specific group of users and stakeholders about their characteristics, goals, and scenarios.
- **Observation:** Observation is used to observe the behavior and actions of the users and stakeholders in their natural environment.
- **Document Analysis:** Document analysis is used to review and analyze existing documents related to the domain of fashion and wardrobe management.

Design Tools

The design tools are used to design and model the structure and behavior of the system. The proposed design tools for the Wardrobe Wizard mobile application are:

- **UML:** UML is used to create diagrams such as use case diagrams, class diagrams, sequence diagrams, etc. that represent the system's functionality and interactions.
- **Prototypes:** Prototypes are used to create interactive or functional versions of the user interface (UI) or some features of the system.
- **Algorithms:** Algorithms are used to create pseudocode or flowcharts that represent the logic and steps of some processes or functions of the system.

Implementation Tools

The implementation tools are used to code and build the system. The proposed implementation tools for the Wardrobe Wizard mobile application are:

- **Android Studio:** Android Studio is used to develop, test, debug, and deploy Android applications using Java or Kotlin programming languages.
- **Subabase:** Supabase is used to provide cloud storage service, authentication service, machine learning service, etc. for the system.
- **APIs:** APIs are used to integrate external services such as weather service, calendar service, social media platforms, QR code generator, etc. for the system.

Deployment Tools

The deployment tools are used to deploy and distribute the system. The proposed deployment tools for the Wardrobe Wizard mobile application are:

- Google Play Store: Google Play Store is used to publish and distribute Android applications to users around the world.

Maintenance Tools

The maintenance tools are used to maintain and update the system. The proposed maintenance tools for the Wardrobe Wizard mobile application are:

- GitHub: GitHub is used