HopeLink: Empowering Donations for a Better Tomorrow

An Online Fundraising and Donations Portal

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Presentation Outline

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- ➔ *Proposed Solution and its Features*
- ➔ *Umbrella and Web Engineering Framework Activities*
- ➔ *Communication*
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- ➔ *Modeling*
- ➔ *Use Cases*
- ➔ *Web Application Architecture Framework (WAAF) Matrix*
- ➔ *Interaction Design*
- ➔ *Information Design*

Introduction

- ***Problem Statement:***
  - Many underdeveloped regions of our country face difficulties in raising funds and managing donations.
  - NGOs struggle to connect with potential donors and efficiently track their requests for aid.

- ***Objective:***
  - To create a user-friendly platform connecting NGOs and donors, with a clear focus on secured donations, ease of use, and real-time updates.

Proposed Solution

- ***HopeLink Platform:***
  - ***A web-based portal that:***
    - Allows NGOs to request donations for specific causes, track donations, and connect with donors.
    - Allows donors to donate for the requests raised by the NGOs and track their donations.
    - Allows admins to manage the requests and oversee the transparency of all the transactions.

Proposed Features

- ***Key Features:***
  - Real-time updates on donation requests.
  - Multiple payment methods.
  - Admin dashboard for managing and tracking NGO requests.
  - Notifications for donors and NGOs regarding ongoing donation drives.
  - Legitimacy of NGOs by verifying their uploaded certification documents.

Umbrella Activities

- ***Risk Management:***
  - Addressing heterogenous donation methods, service availability, and transaction integrity.
- ***Quality Assurance:***
  - Continuous testing for seamless payment processing, user authentication, and data handling.
- ***Change Management:***
  - Tracking the changes after each increment and managing their effects.
- ***Project Management:***
  - Tracking and monitoring progress of each increment.

Web Engineering Framework Activities

➔ ***Communication:*** Survey NGOs, donors, and admins to gather specific needs.

➔ ***Planning:*** Identify the scope, functionalities, potential risks and finally generate a tentative schedule for deployment.

➔ ***Modeling:*** Design interface and navigations for NGOs, donors, and admins.

➔ ***Construction:*** Build both the frontend and backend of the platform using a modern web development stack.

➔ ***Deployment:*** Release the increment and gather feedback from users.

Communication Phase: Questionnaire

- ***NGO Questionnaire:***
  - What specific fields should be included in donation requests?
  - What type of documents will they upload for verification?
- ***Donor Questionnaire:***
  - Which donation methods do they prefer?
  - How important is real-time tracking for them?
- ***Admin Questionnaire:***
  - What analytics are needed for tracking donations?
  - What will be their expected response time for approving or postponing requests?

Planning Phase: Project Scope

- ***Context:*** The goal is to create a secure, transparent online platform for NGOs and donors.
- ***Information Objectives:*** Incorporate NGO documents, donation tracking details, and real-time notifications.
- ***Functionality:*** User-specific dashboards, donation requests, user authentication, and integration with multiple payment systems.
- ***Constraints:*** Ensure user-friendly design and navigations, guarantee 85% or more service uptime.
- ***Performance:*** System should handle at least 100 concurrent users and provide real-time updates for donation statuses.

Planning Phase: The Schedule

- ➔ ***Week 1-2:*** NGO dashboard, NGO document submission system.
- ➔ ***Week 3-4:*** NGO request creation and admin dashboard.
- ➔ ***Weeks 5-6:*** Donor dashboard, donation payment integration and tracking system.
- ➔ ***Weeks 7-8:*** Advanced admin features and notification system.

Planning Phase: Risk and Change Management

- ***Risk Management:***
  - Plan for a disaster recovery system in case of any type of failure.
  - Implement frequent backup procedures and ensure database redundancy.
- ***Change Management:***
  - Create a formal process for approving changes in system design, payment gateways, or major updates.
  - Ensure proper version control for tracking changes.

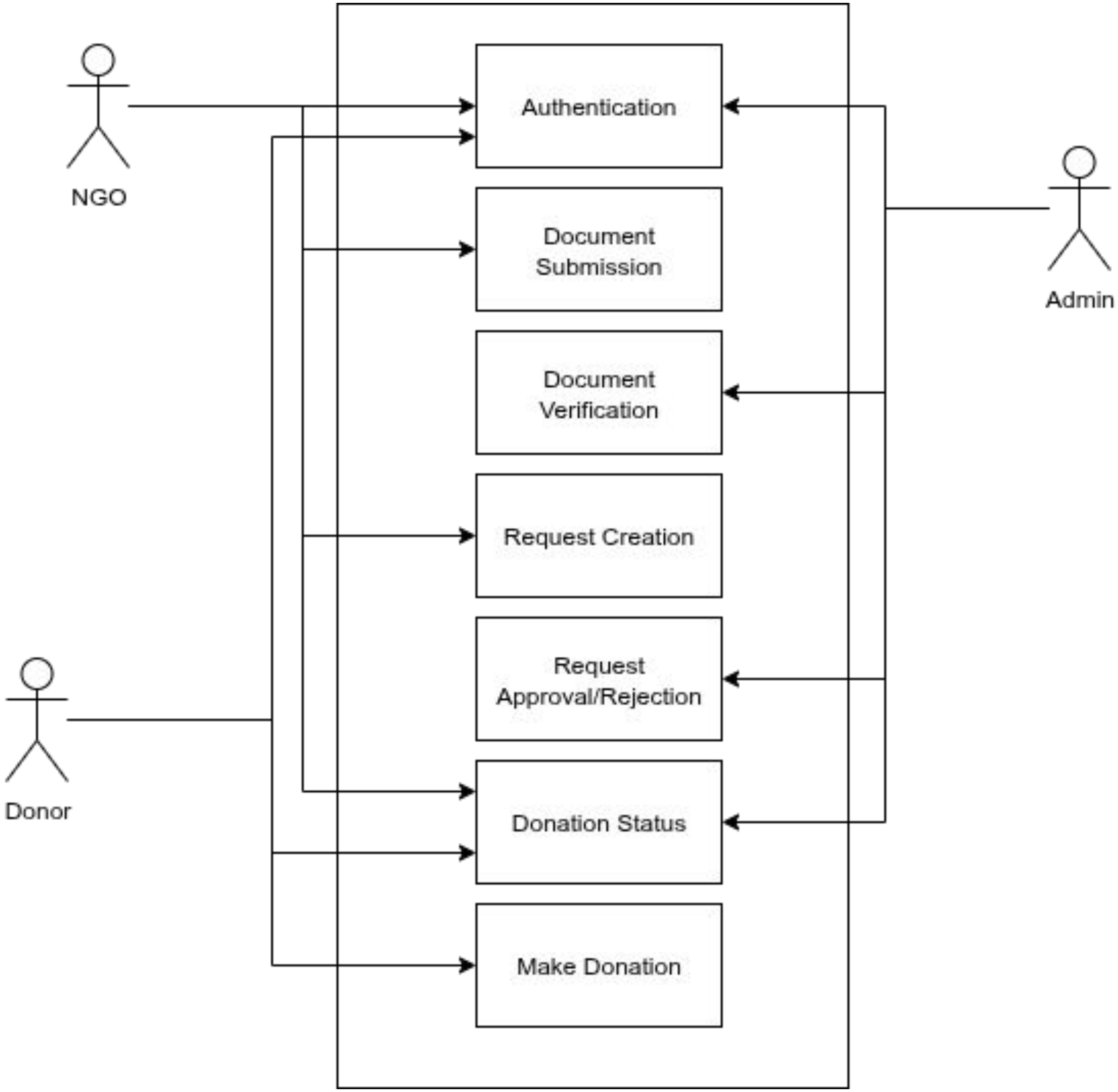
Modeling Phase: Interface and Navigation Modeling

- ***Interface Modeling:***
  - Simple forms for NGOs to submit donation requests.
  - Admin interface to approve or reject requests and track donations.
  - Donor interface for making donations and viewing statuses.
- ***Navigation Modeling:***
  - ***For NGO:*** Home → Register NGO → Submit Request → Track Donations.
  - ***For Admin:*** Home → Check NGO Documents → Approve/Reject Request → Track All Donations.
  - ***For Donor:*** Home → Check Requests → Make Donations → View Donation Status.

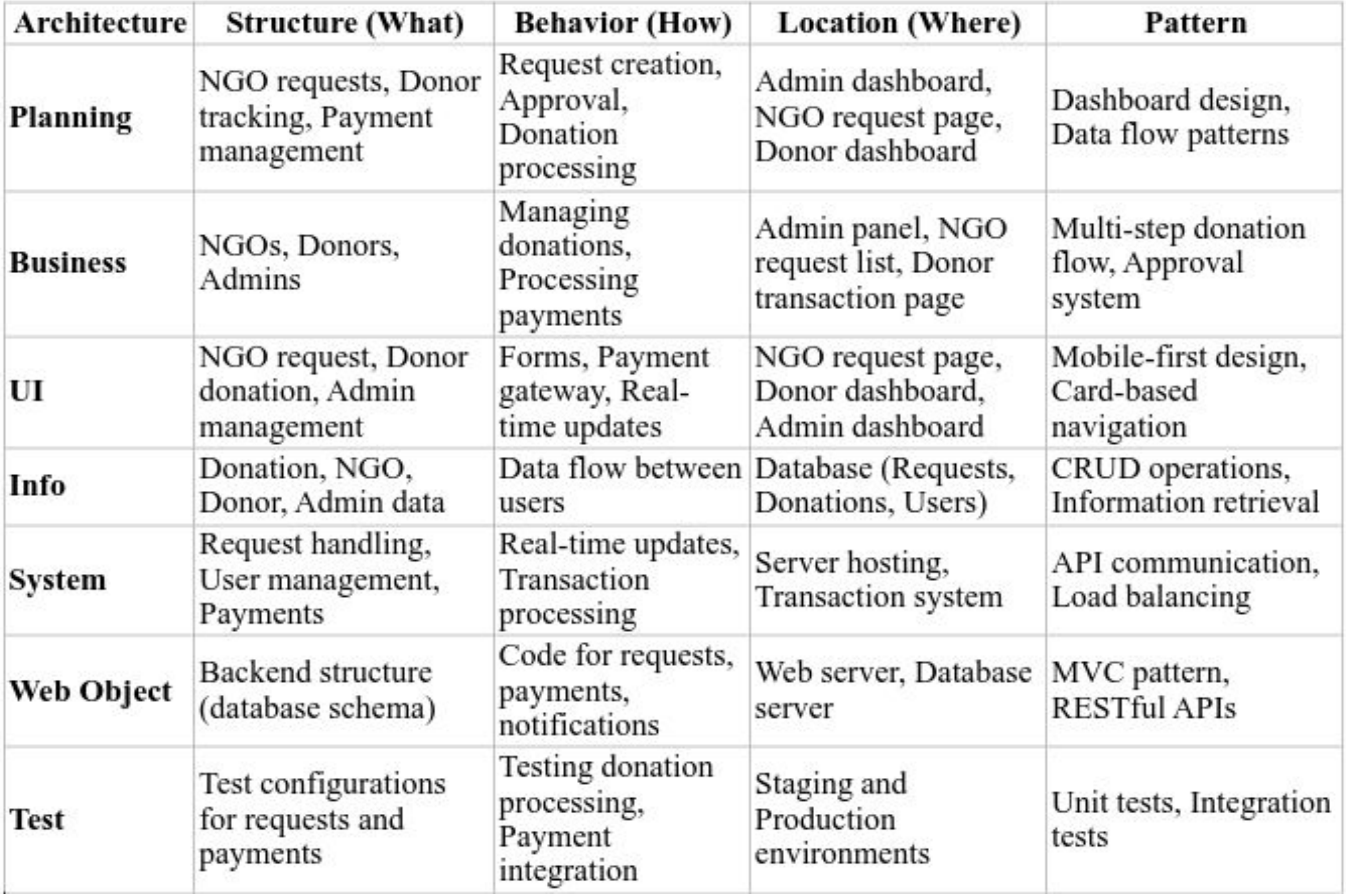
Modeling Phase: Data Modeling and Use Case Scenario

- ***Data Modeling:***
  - ***Database tables:*** Users, Documents, Requests, Transactions.
  - ***Relationships:***
    - One NGO can make many donation requests.
    - One donor can donate for many NGO requests.
- ***Use Case Scenario:***
  - NGO submits a request → Admin approves → Donor sees request → Donor donates → Donor and NGO both receive donation status update.

Use Case Diagram



Web Application Architecture Framework (WAAF) Matrix



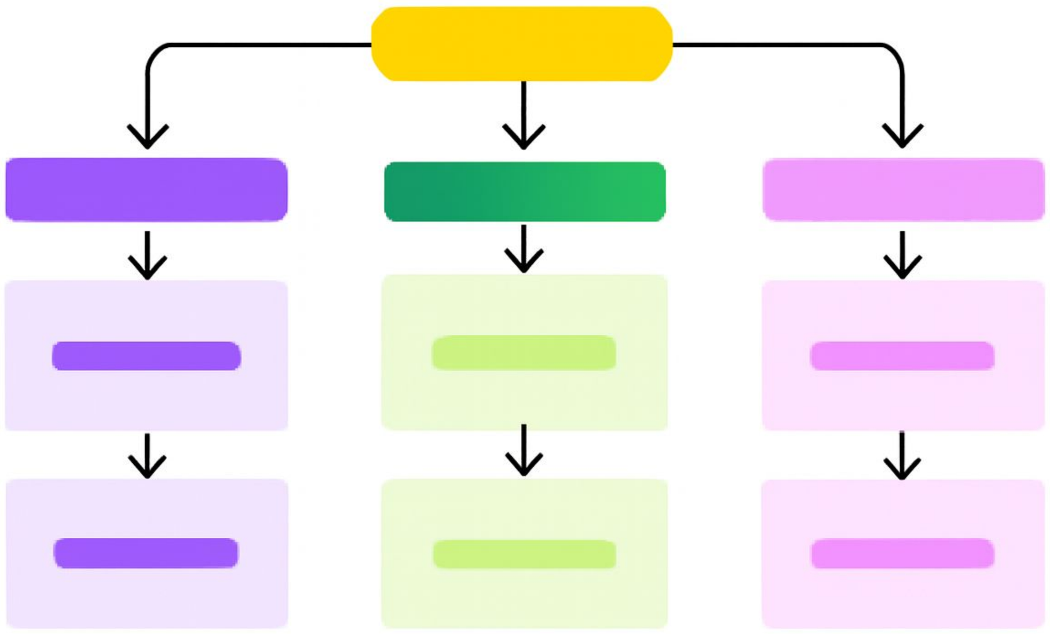
Architecture	Structure (What)	Behavior (How)	Location (Where)	Pattern
Planning	NGO requests, Donor tracking, Payment management	Request creation, Approval, Donation processing	Admin dashboard, NGO request page, Donor dashboard	Dashboard design, Data flow patterns
Business	NGOs, Donors, Admins	Managing donations, Processing payments	Admin panel, NGO request list, Donor transaction page	Multi-step donation flow, Approval system
UI	NGO request, Donor donation, Admin management	Forms, Payment gateway, Real-time updates	NGO request page, Donor dashboard, Admin dashboard	Mobile-first design, Card-based navigation
Info	Donation, NGO, Donor, Admin data	Data flow between users	Database (Requests, Donations, Users)	CRUD operations, Information retrieval
System	Request handling, User management, Payments	Real-time updates, Transaction processing	Server hosting, Transaction system	API communication, Load balancing
Web Object	Backend structure (database schema)	Code for requests, payments, notifications	Web server, Database server	MVC pattern, RESTful APIs
Test	Test configurations for requests and payments	Testing donation processing, Payment integration	Staging and Production environments	Unit tests, Integration tests

Interaction Design Guidelines

- ***Consistency:***
  - Use same icons and labels across the platform.
- ***Feedback:***
  - Success messages when donations are successfully made.
- ***Simplicity:***
  - One-click donation process, minimal text.
- ***Visibility:***
  - Clear labels like "Pending" and "Completed".
- ***Error Prevention:***
  - Confirm before donation submission.
- ***Accessibility:***
  - Support for easily accessible, color-coded menus.

Information Design Structure

- ***Hierarchical Structure:***
  - Clear categories for users (Donors, NGOs, Admins).



Thank You!