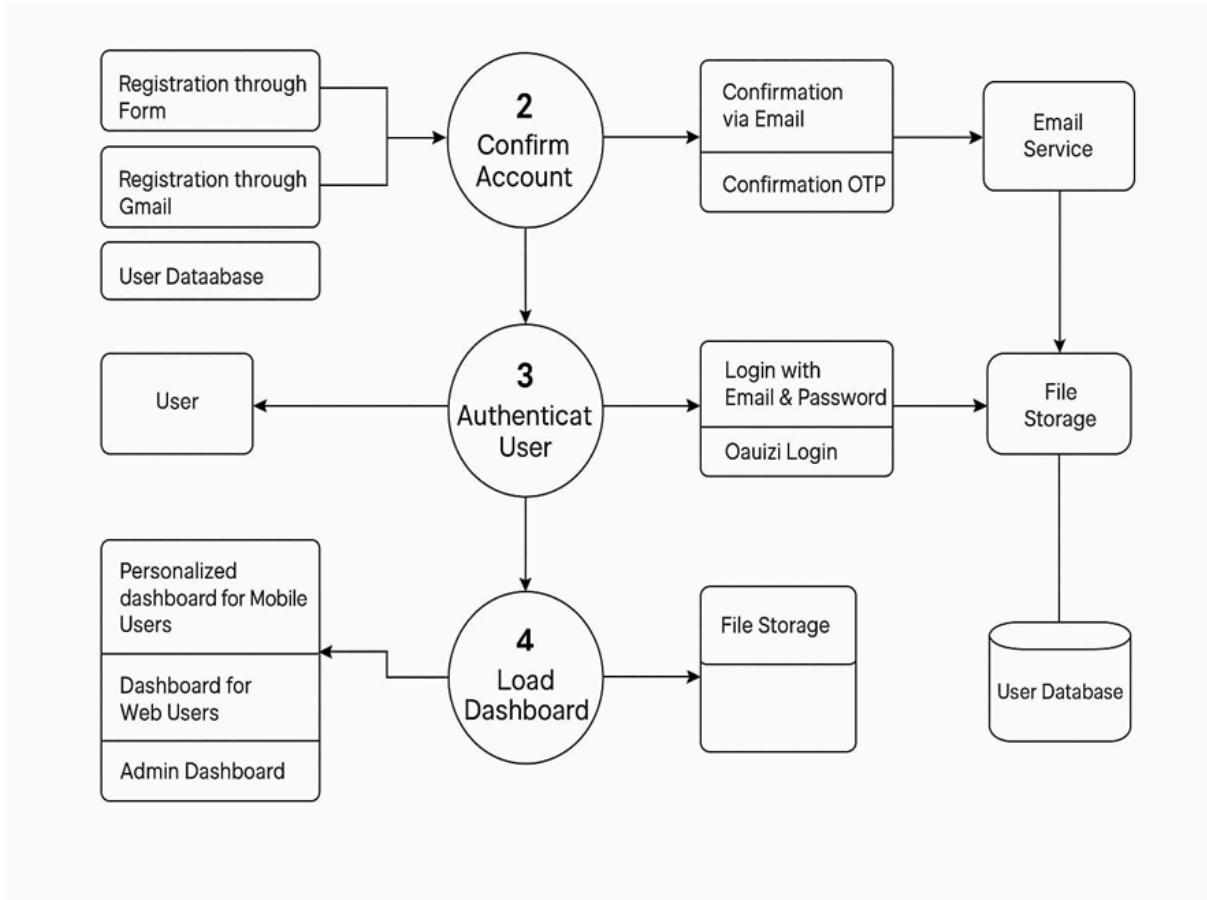


Project Requirement Analysis

1. Project Objective

Design and develop a **user-centric web and mobile application** that enables users to register, confirm accounts, log in, and access personalized dashboards. The application will offer multiple registration methods while ensuring high **security, usability, performance, and scalability**.

2. Data Flow Diagram



3. Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story/Sub-Task)
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FR-1	User Registration	<ul style="list-style-type: none"> - Registration through Form - Registration via Gmail - Registration via LinkedIn
FR-2	User Confirmation	<ul style="list-style-type: none"> - Confirmation via Email - Confirmation via OTP

FR No.	Functional Requirement (Epic)	Sub Requirement (Story/Sub-Task)
FR-3	User Login	<ul style="list-style-type: none"> - Login with Email & Password - Social Login (Gmail, Facebook) - Personalized Dashboard for Mobile Users
FR-4	User Dashboard	<ul style="list-style-type: none"> - Dashboard for Web Users - Admin Dashboard

4. Non-functional Requirements

NFR No.	Requirement	Description
NFR-1	Usability	Intuitive UI/UX for both mobile and web platforms.
NFR-2	Security	Secure authentication (SHA-256), OWASP compliance, role- based access.
NFR-3	Reliability	99.9% uptime with robust error handling and backups.
NFR-4	Performance	Response time <2s under 1000+ concurrent users.
NFR-5	Availability	Cloud deployment with load balancing and failover.

NFR-6	Scalability	Microservices architecture for horizontal scaling.
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5. Technical Architecture

Architecture Type: 3-Tier (Presentation, Application, Data)

Technology Stack

S. No	Component	Description	Technology
1	User Interface	Web & Mobile UI	React.js, Flutter
2	Application Logic-1	Auth & User Management	Python (Django)
3	Application Logic-2	API Services & Business Logic	Node.js
4	Database	Structured Data Storage	PostgreSQL
5	Cloud Database	NoSQL for scalability	MongoDB Atlas

S. No	Component	Description	Technology
6	File Storage	User uploads & media	AWS S3
7	External API-1	Social Login integration	OAuth 2.0
8	External API-2	Email service	SendGrid
9	Infrastructure	Cloud deployment	AWS EC2, Kubernetes

6. Application Characteristics

S. No	Characteristic	Description	Technology
1	Open-Source Frameworks	Core development frameworks	Django, React, Flutter
2	Security	Token-based auth, encryption standards	JWT, OAuth, SHA-256, OWASP
3	Scalable Architecture	Microservices with orchestration	Docker, Kubernetes (AWS EKS)
4	Availability	Load balancing & auto-scaling	AWS ALB
5	Performance	Caching & CDN for speed	Redis, AWS CloudFront