

Organisation:



bitwise

Problem Statement: Paperless Office

Making the official activities to go paperless - like sending official communications through e-media, automating procedures for protecting the environment. Design a customizable workflow management system to handle submission of documents and approval workflow with facility to sign the document with approval seal. This system should have ability to intimate the concerned party by email and also be manageable by email.

Problem Code: DS171

Team Name: BitWise

Team Leader Name: Chaitya Chheda

College Code: U-0334

SOLUTION

DigiDocs is a **complete integrated web portal** which makes the official activities go paperless.

HOW IT WORKS?

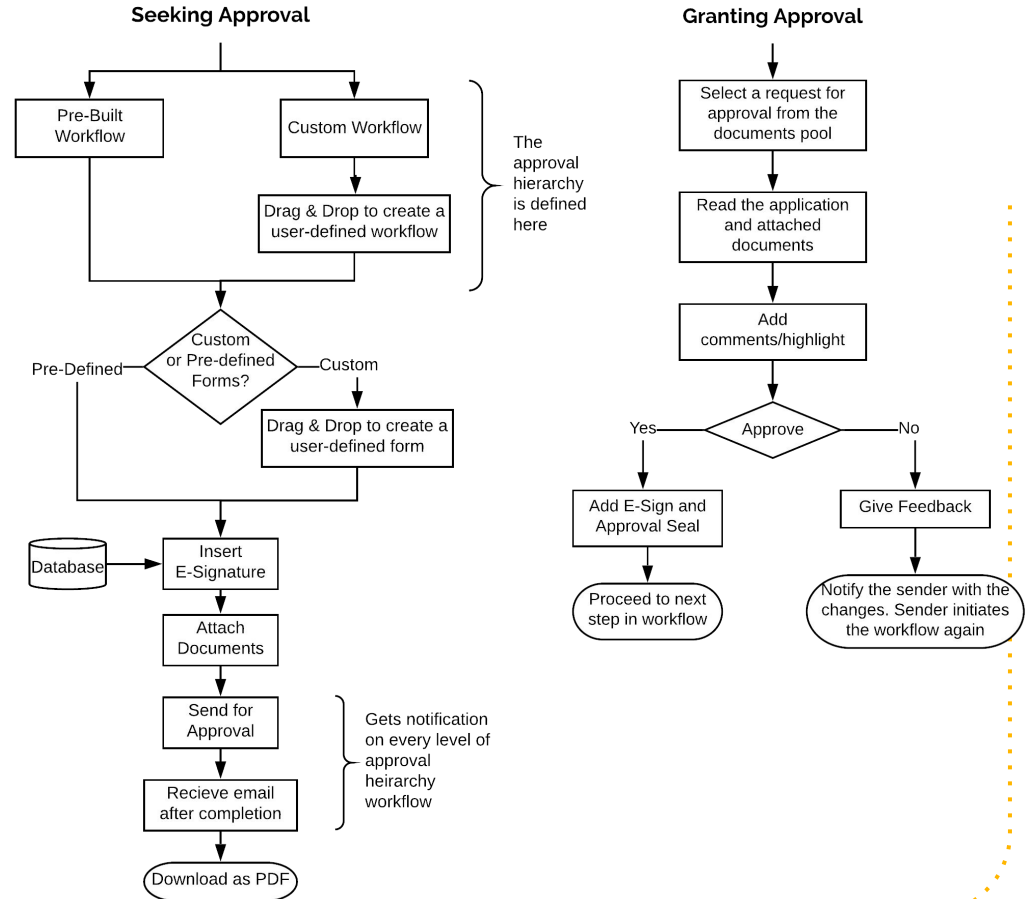
Design forms using simple drag-and-drop tools, or even import/export in JSON or XML format to facilitate communication with other application.

Build workflows with ease using our intuitive interface to streamline and optimize complex processes.

Consent or approve documents using e-signatures and approval seal.

Audit every workflow to gain insights and real-time updates for analytics.

Communicate using emails and Instant messaging service.



FEATURES

Workflow Automation

Assemble complex workflows, starting **from scratch** or using a **pre-built** template,

Deftly define logic and rules, automate routings, set permissions and send custom notifications,

E-Communication

Send official communications through **emails** and create custom notifications to intimate the concerned party.

Connect with individuals or groups through **instant messaging** service.

Online Forms

Create any digital online form in just minutes with no coding or IT support needed with our **drag-and-drop** form builder.

Import existing forms, embed conditional logic, use multiple form field types, integrate e-signatures.

Encryption & E-Signatures

Authorised approval through Electronic signature and approval seal along with Authentication Techniques(**eg. PIN/Biometrics**) to verify the user before signing.

Automatic archiving document and signature with standard **Encryption** techniques.

Audits & Analytics

Every workflow is automatically archived, promoting transparency and accountability.

Custom **dashboards** and **visualization tools** give you insights and real-time updates to identify bottlenecks and improve overall efficiency of the workflow.

Document Management System

Centralized document database with features like Document **Labeling, Searching, Segregation** etc with a Cabinet/Drawer/Folder design that mimics a traditional physical filing system .



TECHNOLOGY STACK



DATABASE



E-SIGNATURE API BY Controller of Certifying Authorities



BOUNCY CASTLE

ENCRYPTION



WEB PLATFORM DEVELOPMENT



MESSAGING API

Show Stopper

Why use DigiDocs?

Real-time audit trails to keep you informed at all times. Actions are recorded and analysed to grade employees in the office. (Eg. Employee of the Month).

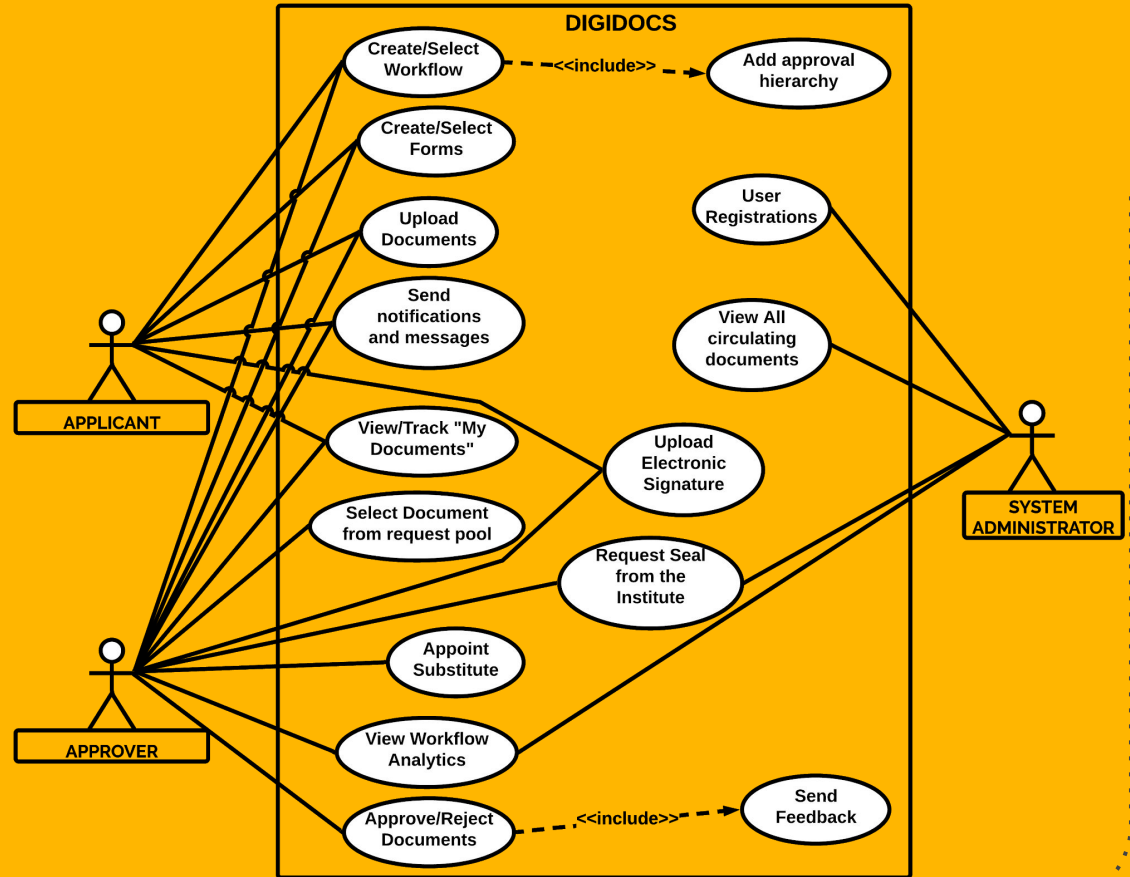
Multi-language support makes it easy to design dynamic forms and documents, helping serve diverse groups.

Collaborative working to have more organized document editing and focused conversations in the team.

Version control to record changes in documents by keeping a track of modifications done.

24x7 accessibility with hand-held devices support.

Use Case



Dependencies

SOFTWARE

1. Open Source E-Signature API by CCA, Government of India or DocuSign, ChatKit etc.
2. Database - Cassandra

HARDWARE

1. Biometric Devices.
2. Private Servers.

DEPLOYMENT

1. On Premise Deployment: More secure, easy to access and full control.
2. Master Slave Technique for hosting database.
3. Blue-Green Deployment for adding new features in the production environment.

Non Functional Requirements

FAULT TOLERANCE & ROBUSTNESS

- Monitoring by industry standard tools/frameworks like nagios.

HIGH AVAILABILITY

- Our site will be deployed on multiple servers and load will be distributed by load balancers.

EXTENSIBILITY

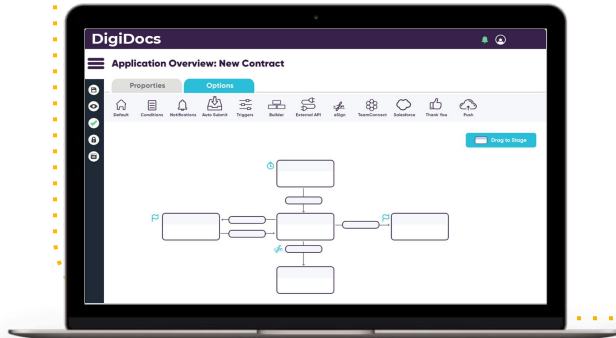
- Modular code to support changes due to the new functionality.
- No hard dependencies between the modules.

MAINTAINABILITY

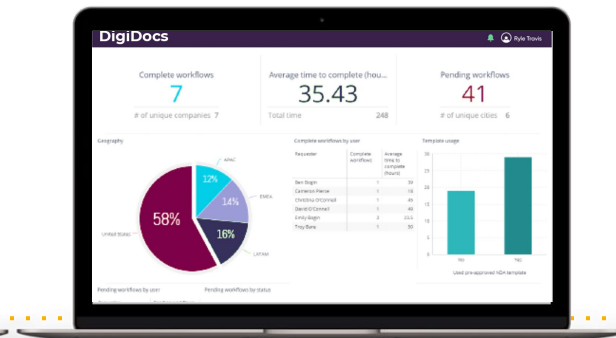
- Generate log files and regular back-up to undergo routine maintenance.

RELIABILITY

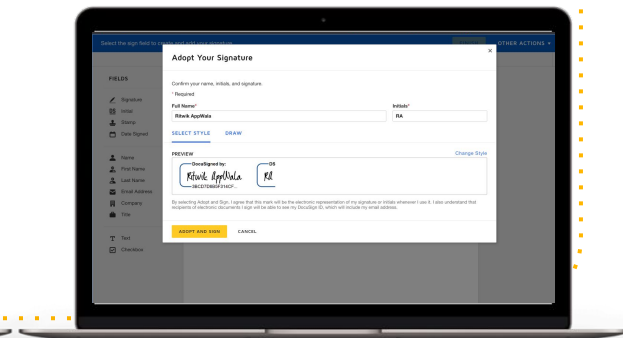
- Cope with unpredicted outages using concepts of Distributed Computing.



WORKFLOW AUTOMATION



AUDIT & ANALYTICS



ELECTRONIC SIGNATURE