

Swift Loan Processing

Electronic Loan Application And Processing

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What is Swift Loan Processing?

- Semi automated loan processing
- Online process
- Quicker processing
- Background processing

Who is this for?

- Fast paced society
- People who prefer to do banking online

Functional Requirements

- Allow users to register accounts
- Store redundant basic information
- Require secure authentication of users
- Allow users to apply for loans
- First version must allow users to apply for collateralize personal loans and collateralize consumer loans
- Allow users to view existing or previous applications
- Allow users to cancel applications within the first 24 hours

Functional Requirements

- All user interactions will take place in a webpage.
- The user will input data through webpage
- During a single session, the web page will keep forms populated
- To be able to do any interaction, the user must be logged in.
- All completed documents will be provided in the form of PDF documents and will be available via downloads.

Software Architecture

- Django Framework
- MySQL Database
- Two separate applications
- 4-tier Architecture

Software Architecture



Software Architecture



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- Web Application - Prepares forms, parses input, renders templates
- REST API - Communicates with application server
- Data Processor - Processes applications, retrieves information
- Database - Stores local copy of customer information

Network Topology

- Servers
- Routers
- Misc.

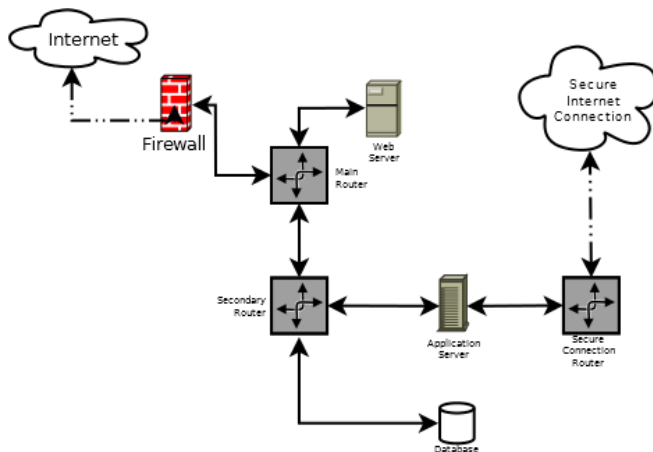
Network Topology

- Servers
 - Web Server
 - Application Server
 - Database
- Routers
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Network Topology

- Servers
 - Web Server
 - Application Server
 - Database
- Routers
 - Main Router
 - Secondary Router
 - Secure Connection Router
- Misc.

Network Topology Cont.



Software Problems Addressed

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- Modular

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- Scaleable
 - Separate database from application
 - Separate application logic from parsing

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- Modular
- Scaleable
 - Separate database from application
 - Separate application logic from parsing
- Maintainable
 - MVC Architecture
 - HTML, CSS, JS are separate from the logic

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- Use REST as middleware

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- Use REST as middleware
 - Well defined vocabulary
 - Easy to implement
 - Already-existing mechanisms for routing, authentication

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- Expandable
 - Additional modules can be created as-needed
 - Separate model, view, controller
 - Different servers for processing and responding to users
 - Allows the server to process multiple applications

Hardware Problems Addressed

- Security
- Scalability

Hardware Problems Addressed

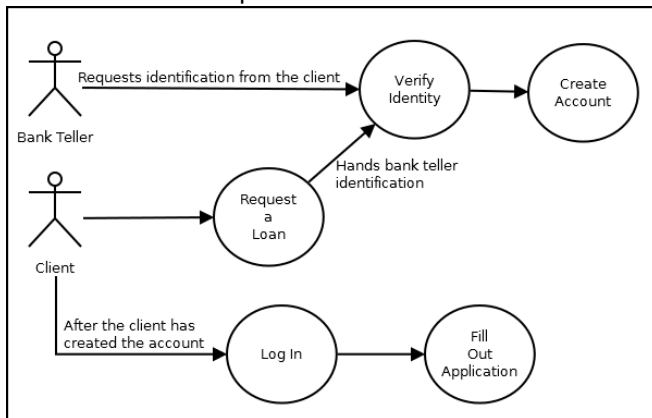
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 - Routers
 - iptables
 - Seperate Internet connections
 - Seperation of execution
- Scalability

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Sample Implementation

Example Use Case: Loan Request as a New Borrower



Questions?