# Testudo Bank Frontend Redesign and Reimplementation

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## Problem Statement

Customers of Testudo Bank expect a clean and enjoyable user experience. The current implementation of Testudo Bank does not provide that. While the basic functionality is there, the user interface leaves much to be desired. We want customers of Testudo Bank to feel like they are using the banking software of the future, not the banking software of the early 2000s. If we are going to support such forward-looking ventures such as cryptocurrency, let our software also at least look the part.

This proposal is for an overhaul of the Testudo Bank frontend. The current frontend is implemented with `.jsp`. I propose that we redesign the frontend to use React. This will allow for cleaner, more maintainable frontend code and will thus contribute to the longevity of Testudo Bank.

## Solution Requirements

- The frontend of Testudo Bank should use React.
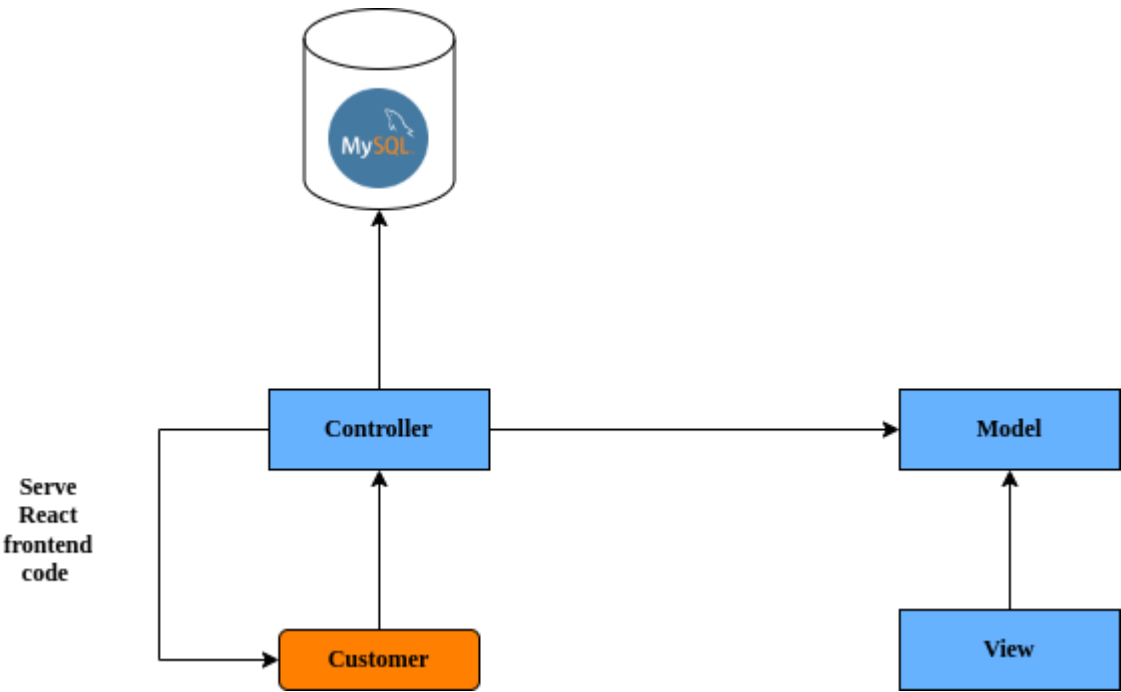- The various pages of the application should be redesigned to be more visually appealing

## Proposed Solution

The proposed solution would be to use React to reimplement much of the UI of Testudo Bank using React. Here are some potential design options for the new version of the UI.

# Flowchart Diagram



# DB Schema

**OverdraftLogs**

| | |
|---|---|
| CustomerID | varchar(255) |
| Timestamp | DATETIME |
| DepositAmt | int |
| OldOverBalance | int |
| NewOverBalance | int |

**Passwords**

| | |
|---|---|
| CustomerID | varchar(255) |
| Password | varchar(255) |

**TransactionHistory**

| | |
|---|---|
| CustomerID | varchar(255) |
| Timestamp | DATETIME |
| Action | varchar(255) |
| Amount | int |

**TransferHistory**

| | |
|---|---|
| TransferFrom | varchar(255) |
| TransferTo | varchar(255) |
| Timestamp | DATETIME |
| Amount | int |

**CryptoHoldings**

| | |
|---|---|
| CustomerID | varchar(255) |
| CryptoName | varchar(255) |
| CryptoAmount | float |

**CryptoHistory**

| | |
|---|---|
| CustomerID | varchar(255) |
| Timestamp | DATETIME |
| Action | varchar(255) |
| CryptoName | varchar(255) |
| CryptoAmount | float |

**Customers**

| | |
|---|---|
| CustomerID | varchar(255) |
| FirstName | varchar(255) |
| LastName | varchar(255) |
| Balance | int |
| OverdraftBalance | int |
| NumFraudReversals | int |

The db schema would not change for this particular feature implementation because this is a purely frontend feature.