Rewards for TFS Team Members - Fungible Token

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Abstract

The purpose of the project is to create a prototype ecosystem, using the Ethereum blockchain to create an ERC20 Token, "TFS Coin", that can be used by the Toyota Financial Services to reward employees. The student team used and created a MySQL database on Amazon Web Services (AWS), Relational Database Service (RDS), two Ethereum smart contracts tested on the Sepolia test network, a NodeJs / ExpressJS backend server, and a ReactJS frontend. The result is an interactive website that the TFS employee can utilize to earn and redeem "TFS Coin" without directly interacting with the blockchain. The website has login authorization methods implemented by JWT, and an interactive rewards store that a user can claim rewards from. The website also includes two methods of earning coins: a daily check-in, and a bug bounty system. The website also includes an admin page where authorized users can modify the rewards list and reward bug bounties.   Keywords: **Blockchain, Fungible Token, AWS**

Architecture
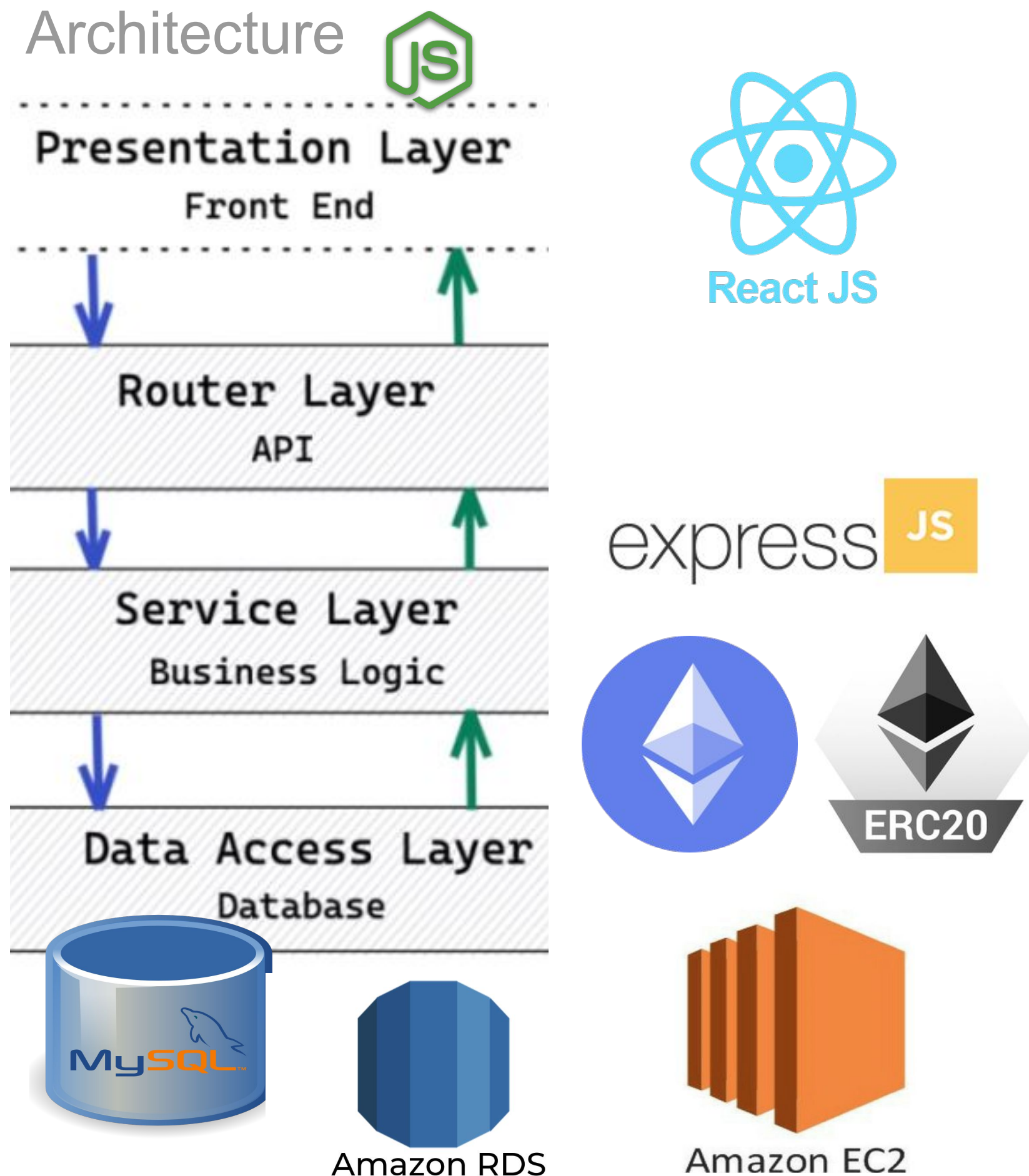
Metrics

4/4 Sponsor set deliverables were met
- **A Secure Wallet:** Generates on Registration
- **A Rewards Store:** Website application created to allow TFS employees to manage earned TFS coins and redeem rewards
- **Rewards service:** User registration, Administrative functions such as creating new rewards and approving bug bounties
- **Earning Coins:** Activity Tracking by daily check-in and Bug Bounty Submissions

Impact

- A Concept Prototype Ecosystem that proves that the **Blockchain technology can be implemented to create a functional rewarding system** for the employees.
- Provides a method of rewarding employees and increase employee morale
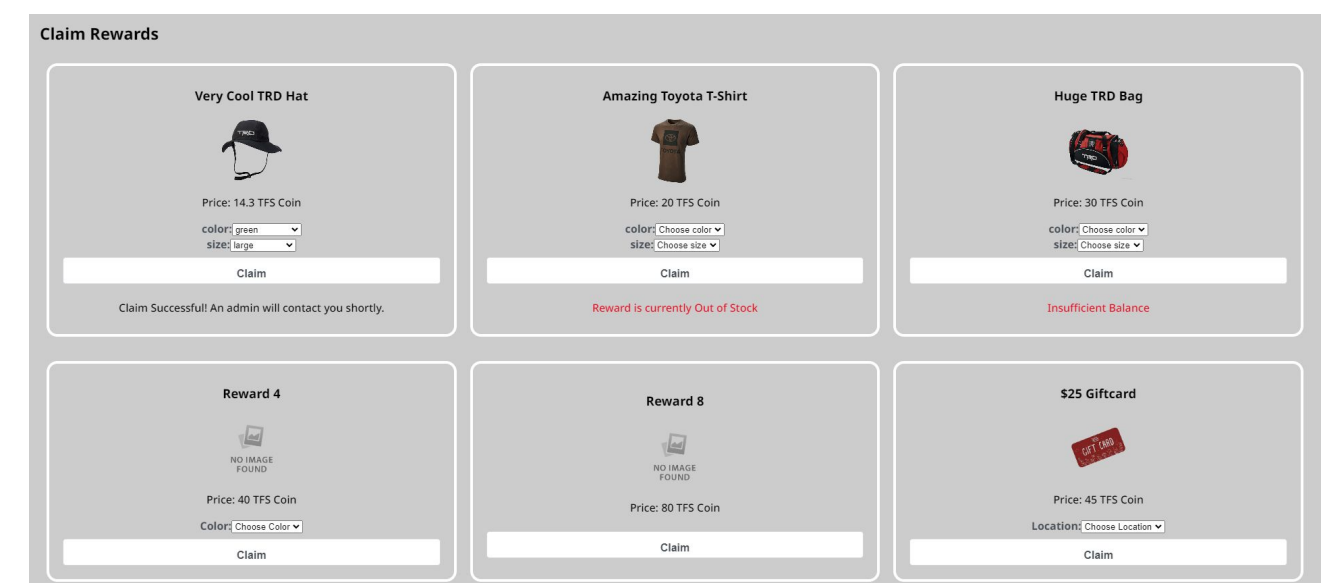
Front-end of Reward Store Functionality

Summary

TFS Coin is a blockchain-based rewards system that incentivizes and recognizes employees for their work by allowing employees to cash out their coins for rewards.

Employees can register and login to interact and manage their TFS Coin with functionalities such as: Transferring coins to another employee, Claiming rewards by using the earned coins, submitting bug bounties and checking in daily to earn coins.

The prototype website also includes an admin page that allows authorized users to modify rewards and award employees for the bug bounty submissions,