Developing a football guessing game as Flutter web app with Blockchain functionality

In collaboration with the startup SayNode Operations AG, we developed a football guessing game as Flutter web application to demonstrate the integration of smart-contract functionality with an Ethereum Virtual Machine (EVM) compatible blockchain.

Introduction and Goals

Web is the newest member of the Flutter™ UI toolkit, and it is interesting to see how it performs along with other emerging technologies such as blockchain and its smart-contract component. SayNode Operations AG has already developed packages to easily interact with VeChain the public bockchain with the focus on solving real world economic problems. To demonstrate the integration of all this new technology, we developed a football guessing game. The goal is to make predictions about the result of a game. Based on the correct winner, goal count and goal difference you are awarded with custom points. The winner and point calculation is handled on a smart contract. The development of this contract was not part of this thesis.

VeChain

This public blockchain is very similar to the broadly known and used Ethereum blockchain. VeChain offers solutions for the weaknesses of Ethereum and provides a unique economic model. With its dual-token system (VET/VTHO) it decouples the costs of interacting with the business side in form of smart contracts from the volatility of the crypto market. VeChain has a system in place to continuously monitor the cost of a transaction to provide a customer friendly business model.

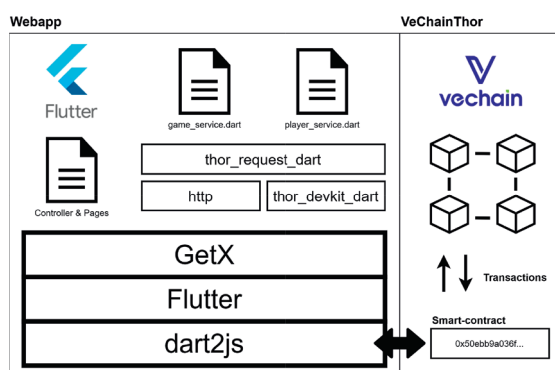## Flutter interaction with VeChain

To connect the Flutter webapp to the smart-contract, we used the "thor_request_dart" package, developed by SayNode. It provides wallet handling and takes care of the communication with the given smart contract.
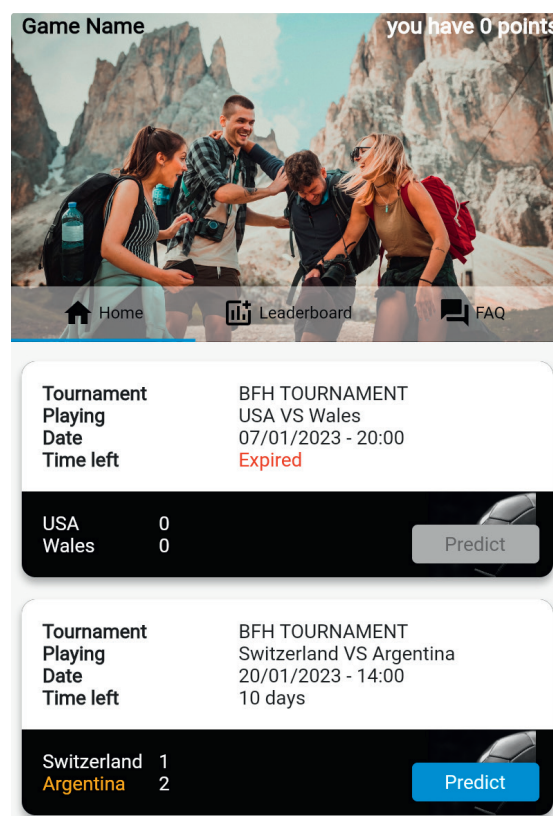
Benefits

With this work we gained essential knowledge about the usability of the thor_request_dart library and could provide valuable feedback to SayNode. They will further improve the library and make the connection of Flutter with VeChain even simpler.

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Architecture overview of Flutter webapp with smart contract interaction

Homepage of football guessing game prototype