UDACITY

Logout

PROJECT SPECIFICATION

FlightSurety

Separation of Concerns, Operational Control and “Fail Fast”

CRITERIA	MEETS SPECIFICATIONS
Smart Contract Seperation	Smart Contract code is separated into multiple contracts: 1) FlightSuretyData.sol for data persistence 2) FlightSuretyApp.sol for app logic and oracles code
Dapp Created and Used for Contract Calls	A Dapp client has been created and is used for triggering contract calls. Client can be launched with “npm run dapp” and is available at http://localhost:8000 Specific contract calls:

CRITERIA	MEETS SPECIFICATIONS
	1) Passenger can purchase insurance for flight 2) Trigger contract to request flight status update
Oracle Server Application	A server app has been created for simulating oracle behavior. Server can be launched with “npm run server”
Operational status control is implemented in contracts	Students has implemented operational status control.
Fail Fast Contract	Contract functions “fail fast” by having a majority of “require()” calls at the beginning of function body

Airlines

CRITERIA	MEETS SPECIFICATIONS

CRITERIA	MEETS SPECIFICATIONS
Airline Contract Initialization	First airline is registered when contract is deployed.
Multiparty Consensus	Only existing airline may register a new airline until there are at least four airlines registered Demonstrated either with Truffle test or by making call from client Dapp
Multiparty Consensus	Registration of fifth and subsequent airlines requires multi-party consensus of 50% of registered airlines Demonstrated either with Truffle test or by making call from client Dapp
Airline Ante	Airline can be registered, but does not participate in contract until it submits funding of 10 ether (make sure it is **not** 10 wei) Demonstrated either with Truffle test or by making call from client Dapp

CRITERIA	MEETS SPECIFICATIONS

Passengers

CRITERIA	MEETS SPECIFICATIONS
Passenger Airline Choice	Passengers can choose from a fixed list of flight numbers and departures that are defined in the Dapp client Your UI implementation should include: 1. Fields for Airline Address and Airline Name 2. Amount of funds to send/which airline to send to 3. Ability to purchase flight insurance for no more than 1 ether
Passenger Payment	Passengers may pay up to 1 ether for purchasing flight insurance.
Passenger Repayment	If flight is delayed due to airline fault, passenger receives credit of 1.5X the amount they paid

CRITERIA	MEETS SPECIFICATIONS
Passenger Withdraw	Passenger can withdraw any funds owed to them as a result of receiving credit for insurance payout
Insurance Payouts	Insurance payouts are not sent directly to passenger's wallet

Oracles (Server App)

CRITERIA	MEETS SPECIFICATIONS
Functioning Oracle	Oracle functionality is implemented in the server app.
Oracle Initialization	Upon startup, 20+ oracles are registered and their assigned indexes are persisted in memory
Oracle Updates	Update flight status requests from client Dapp result in OracleRequest event emitted by Smart Contract that is captured by server (displays on console and handled in code)

CRITERIA	MEETS SPECIFICATIONS
Oracle Functionality	Server will loop through all registered oracles, identify those oracles for which the OracleRequest event applies, and respond by calling into FlightSuretyApp contract with random status code of Unknown (0), On Time (10) or Late Airline (20), Late Weather (30), Late Technical (40), or Late Other (50)