Redux: The sourcce of truth

The state, in the palm of my hand ✋ ⚡

What we are going to cover today?

- What is redux?
- Actions, reducers, store

What is Redux? 👀

State, the main character

" Redux is a predictable state container for JavaScript apps
Redux   "

Notes:

1. Tiny library, just 2Kb including dependencies

2. Works in the client, server and mobile envs

3. Single source of truth

Redux elements 😮

Actions

- The representation of an event in the application
- Created using actions creators
- There are the only way to change the data in the store
- Plain javascript objects

```
1 // Change the water to solid
2
3 function changeToSolid() {
4   return {
5     type: 'changedToSolid',
6     payload: {
7       state: 'solid'
8     }
9   }
10 }
```

Reducers

- Pure functions, no side effects

- Perform changes based in an action over the state

- Take fuel (prev. state), perform a combustion action (reduction) and return motion (new state)

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```
 1 function waterReducer(state = {}, action) {
 2   switch (action.type) {
 3     case 'changedToSolid':
 4       return {...state, action.payload };
 5     case 'changeToLiquid':
 6       return {...state, action.payload };
 7     default:
 8       return state // Remain as a gas
 9   }
10 }
```

Store

- Responsible for holding the state of the application
- There is one store, hence one source of truth
- Responsabilities like:
  - Allow access to the state `store.getState()`
  - Update the state via `store.dispatch(action)`
  - Register listeners via `store.subscribe()`

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```
const store = createStore(waterReducer);
```

Let's put everything together! 🔧