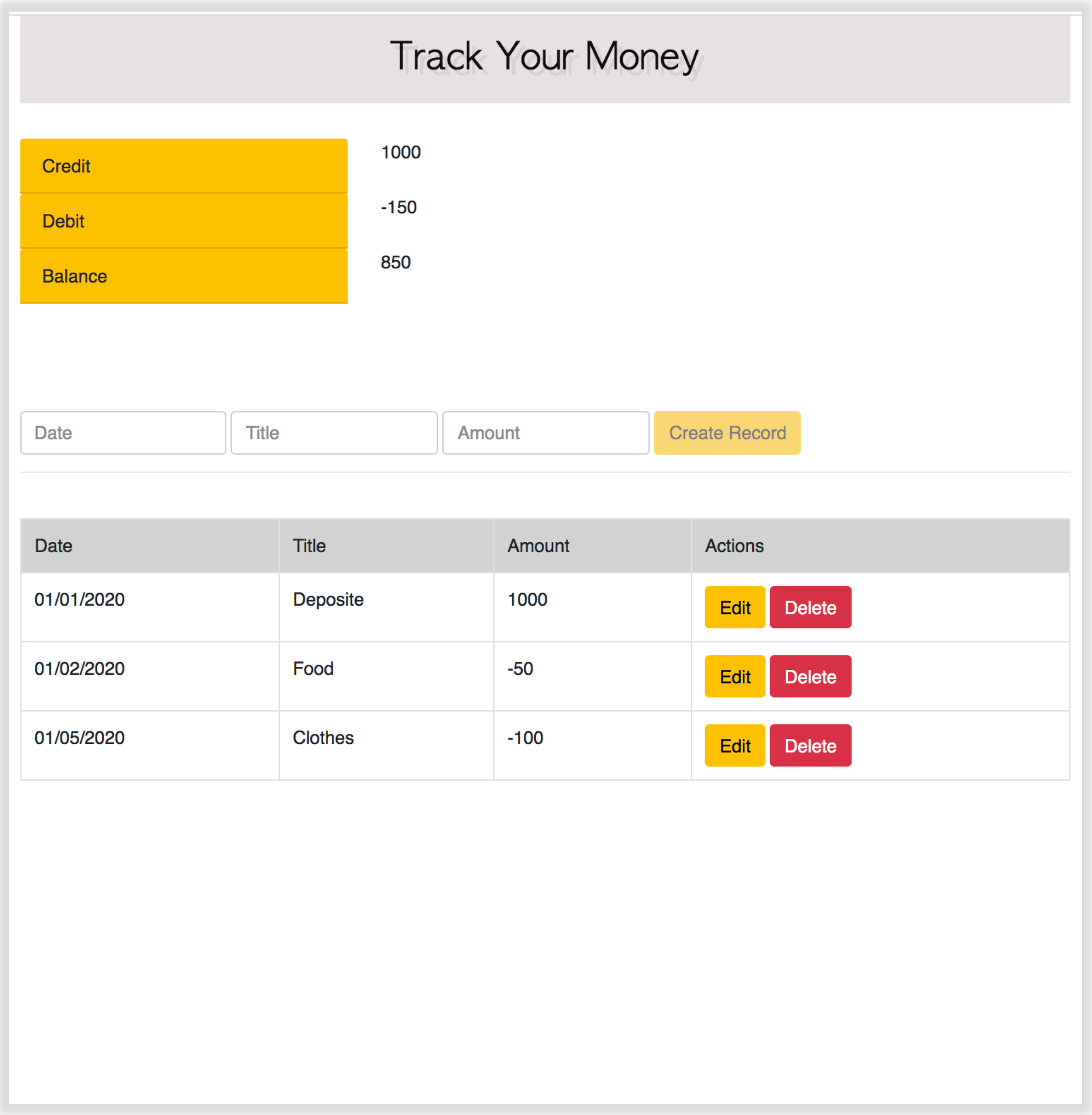
App - *Track Your Money*

About

- Tracking your money through application proving CRUD using React.



Track Your Money

Credit	1000
Debit	-150
Balance	850

Date	Title	Amount	Actions
01/01/2020	Deposite	1000	Edit Delete
01/02/2020	Food	-50	Edit Delete
01/05/2020	Clothes	-100	Edit Delete

Structure

1. Components Structure

```
  App
   |___ Summary
   |___ Form _ _ _ _ RecordsAPI
   |                    |
   |___ Table           |
           |_______ TableRow
                        |____ TableDisplay
                        |____ TableEdit
```

- **App Component:** is the data hub
  - state: `records` for entries in Table component
  - state: `isLoaded` show loading info, before showing Table
  - state: `error`
  - method: `componentDidMount()` get data from database
  - method: `addRecord()` passed to Form
  - method: `deleteRecord()` passed to Table and TableRow
  - method: `updateRecord()` passed to Table and TableRow
  - method: `credits()` passed to Summary
  - method: `debits()` passed to Summary
  - method: `balance()` passed to Summary
- **Summary Component:** displays negative/ positive summation for the `records`
- **Form Component:** add `record` into `records`, updating Table
- **Table Component:** just pass `records` to **TableRow**
- **TableRow Component:** display each `record` in `records`
- **RecordsAPI:** utility providing interface to make RESTful API call

2. File Structure

```
|__node_modules
|
|__public
|    |___ index.html
|
|__ src
     |___ utils: RecordsAPI.js
     |
     |___ components:
              |___ App.js
              |___ Form.js
              |___ Summary.js
              |___ Table.js
              |___ TableRow.js
```

Concept

1. Component data flow: Model-> View

- Parent component M-> Child component V
    - Between parent component prop and child component prop
- Child component M-> Parent component V
    - Callback function + The parent component passes the callback function to the child component + In JS, function is a first-class citizen, so the value passed in will be saved as its own field; different from C / Java.
- sibling pass value between components M-> V
    - Must rely on the common parent component of the two to pass
    - But when the relationship between components becomes more and more complicated, this way of relying on the parent component as a middleman to pass values should be a mess!
    - Redux comes into picture

2. Two-way binding: Model <-> View

- By binding `<input>`the `onChange()`Monitor View transformation
- Update the value of the component in onChange Handler to complete the data flow of View => Model.

3. React life cycle

- **Mount**
    - constructor()
    - componentWillMount()
    - render()
    - componentDidMount()
- **Update**
    - componentWillReceiveProps (): will receive new props
    - shouldComponentUpdate (): Should it be updated?
    - componentWillUpdate (): The component will be updated soon
    - render (): the component is rendered
    - componentDidUpdate (): component completes update
- **Unmount**
    - componentWillUnmount (): Do some data removal before the component is unmounted