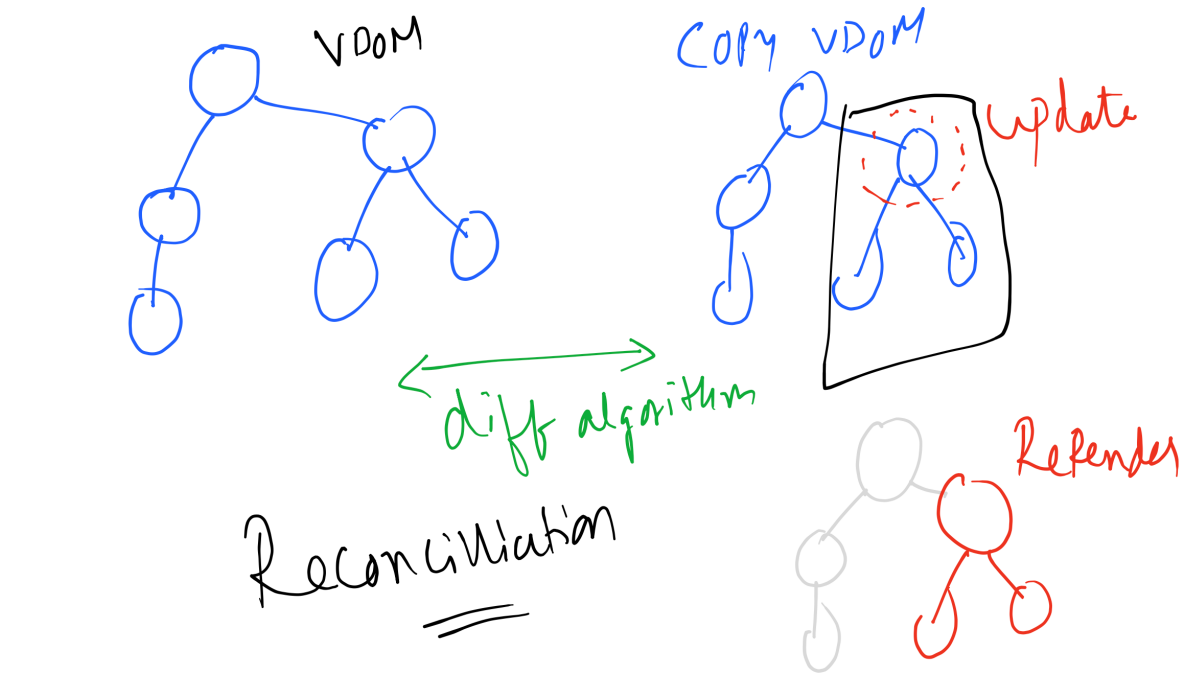
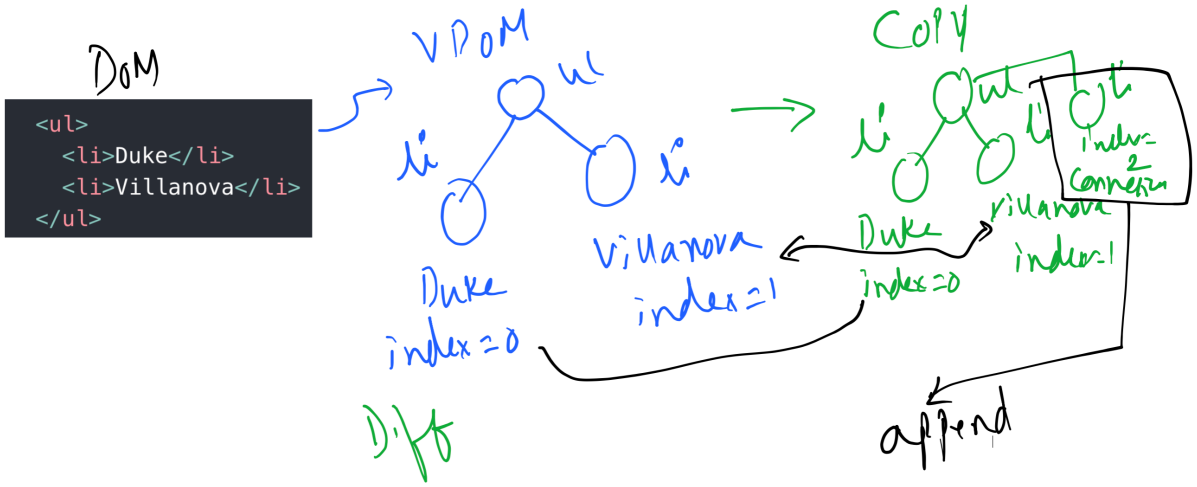
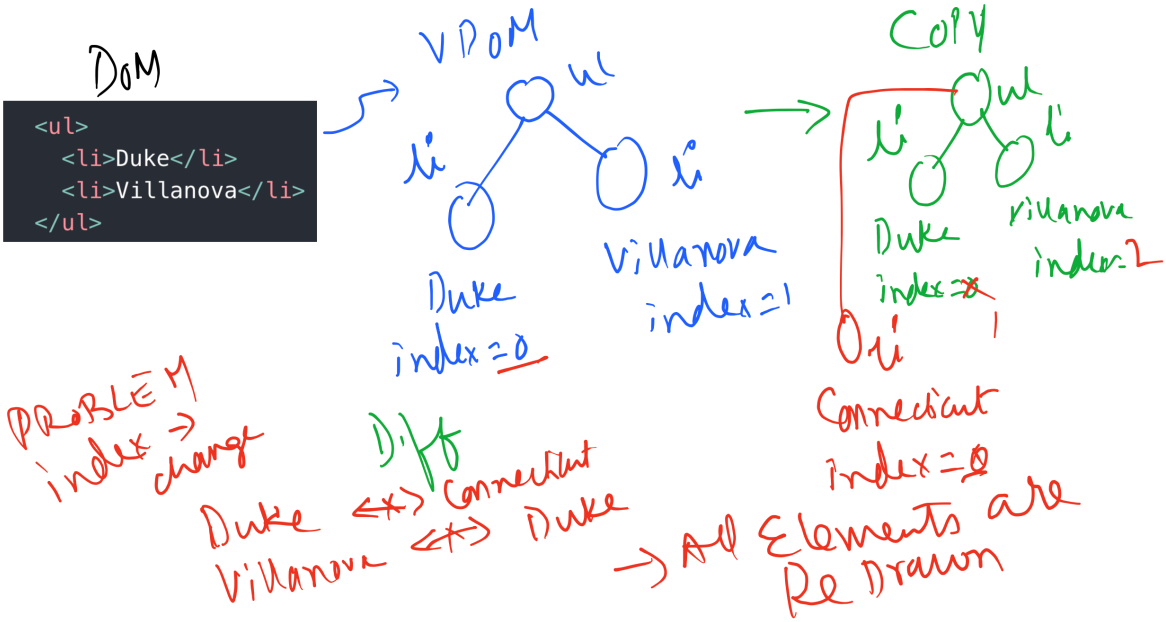

VDOM
Copy VDOM
update
diff algorithm
Reconciliation
Refender


DOM

Duke
Villanova

VDOM
ul
li
li
Duke
index=0
Villanova
index=1
Diff
Copy
li
li
Duke
index=0
Villanova
index=1
li
index=2
Connection
append



Always use Key for list for better reconciliation. Default is it uses index for Diff algorithm

```
<ul>
  <li key="2015">Duke</li>
  <li key="2016">Villanova</li>
</ul>

<ul>
  <li key="2014">Connecticut</li>
  <li key="2015">Duke</li>
  <li key="2016">Villanova</li>
</ul>
```

Deleting a Customer – Event Handling

```
export default class CustomerList extends Component {
  x = 10; // is also a state, but not managed by react
  y = 15; // is also a state, but not managed by react
  state = {
    name : "Raj",
    age: 35,
    customers: [...
    ]
  }
  deleteCustomer(id) {
    // easiest way of deleting array elements
    let custs = this.state.customers.filter(c => c.id !== id);
    // this won't work, state updates but reconcillation won't happen
    // this.state.customers = custs;
    // always use setState to update state and force reconcilliation - redraw
    this.setState({
      customers: custs
    })
  }

  render() {
    return (
      <div>
        {
          this.state.customers.map(cust => <CustomerRow
            delEvent={(id) => this.deleteCustomer(id)}
            customer={cust} key={cust.id}/>)
        }
      </div>
    )
  }
```

```
export default class CustomerRow extends Component {

  deleteRow(id) {
    console.log("Delete Row", id);
    this.props.delEvent(id);
  }

  render() {
    let {id, firstName, lastName} = this.props.customer; // comming
    return (
      <div>
        {firstName} {lastName}
        <button type='button'
          onClick={() => this.deleteRow(id)}>Delete</button>
      </div>
    )
  }
}
```

Rachel Green Delete
Phobhe Buffay Delete
Ross Geller Delete
Joey Tribuanni Delete
Chandler Bing Delete
Monica Geller Delete

original

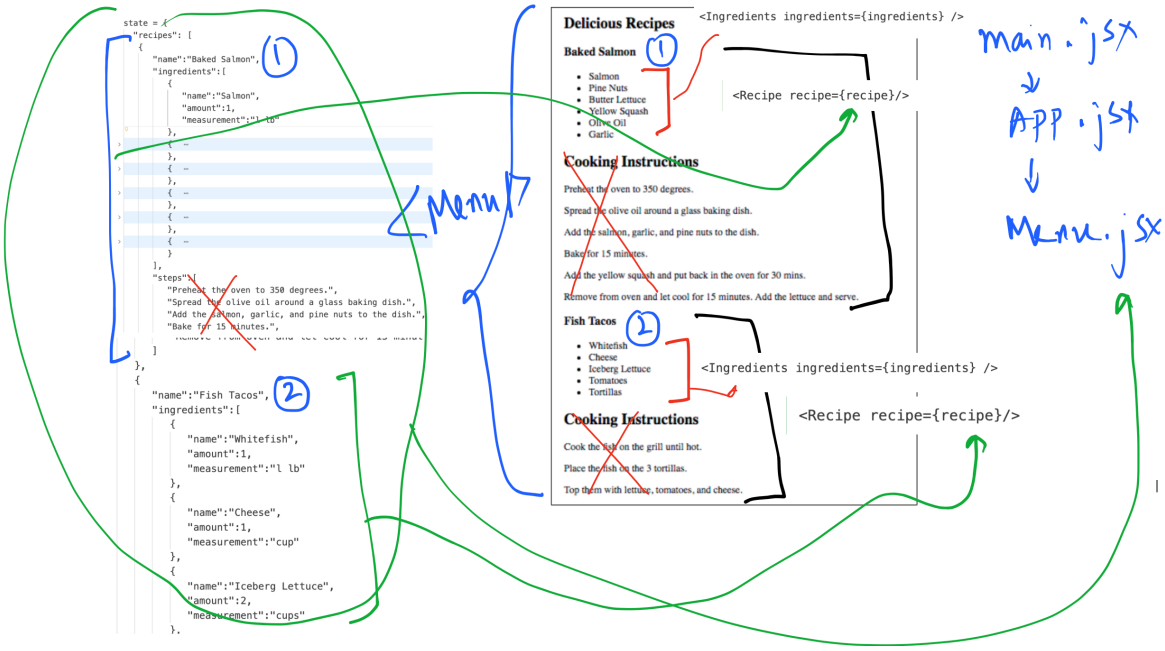
Geller Bing
Ross Geller Delete
Monica Geller Delete

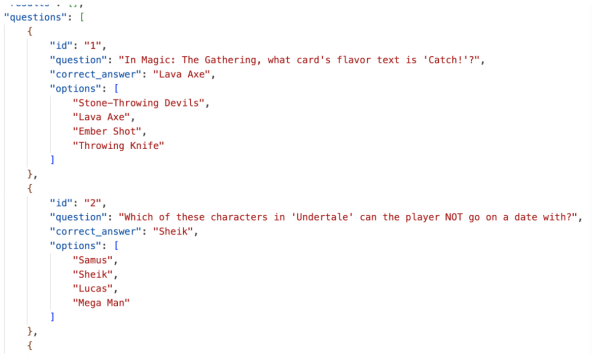
To be displayed

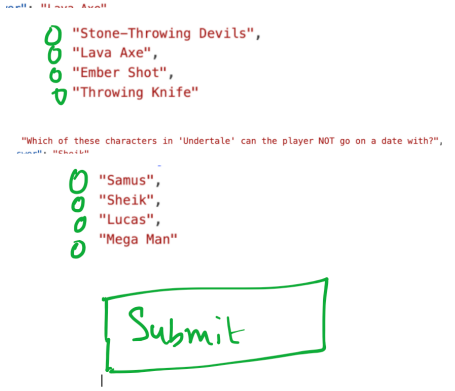
```
filterCustomers(txt) {
  let custs = this.state.original.filter(c => c.lastName.toUpperCase()
    .indexOf(txt.toUpperCase()) >= 0)

  this.setState({
    customers: custs
  })
}
// render returns JSX -> React.createElement() -> JS
render() {
  return (
    <div>
      <Filter filterEvent = {(txt) => this.filterCustomers(txt)}/>
```

```
// filterEvent is props from Parent
export default function Filter({filterEvent}) {
  return (
    <div>
      <input type='text'
        placeholder='search by name'
        onChange={(evt) => filterEvent(evt.target.value)}
        />
    </div>
  )
}
```

Event


state = {
"recipes": [
{
"name":"Baked Salmon",
"ingredients":[
{
"name":"Salmon",
"amount":1,
"measurement":"1 lb"
},
"steps":[
"Preheat the oven to 350 degrees.",
"Spread the olive oil around a glass baking dish.",
"Add the salmon, garlic, and pine nuts to the dish.",
"Bake for 15 minutes.",
]
},
{
"name":"Fish Tacos",
"ingredients":[
{
"name":"Whitefish",
"amount":1,
"measurement":"1 lb"
},
{
"name":"Cheese",
"amount":1,
"measurement":"cup"
},
{
"name":"Iceberg Lettuce",
"amount":2,
"measurement":"cups"
},
1
2
Main
Delicious Recipes
Baked Salmon
Salmon
Pine Nuts
Butter Lettuce
Yellow Squash
Olive Oil
Garlic
Cooking Instructions
Preheat the oven to 350 degrees.
Spread the olive oil around a glass baking dish.
Add the salmon, garlic, and pine nuts to the dish.
Bake for 15 minutes.
Add the yellow squash and put back in the oven for 30 mins.
Remove from oven and let cool for 15 minutes. Add the lettuce and serve.
Fish Tacos
Whitefish
Cheese
Iceberg Lettuce
Tomatoes
Tortillas
Cooking Instructions
Cook the fish on the grill until hot.
Place the fish on the 3 tortillas.
Top them with lettuce, tomatoes, and cheese.
<Ingredients ingredients={ingredients} />
<Recipe recipe={recipe}/>
<Ingredients ingredients={ingredients} />
<Recipe recipe={recipe}/>
main.jsx
App.jsx
Main.jsx


"questions": [
{
"id": "1",
"question": "In Magic: The Gathering, what card's flavor text is 'Catch!'?",
"correct_answer": "Lava Axe",
"options": [
"Stone-Throwing Devils",
"Lava Axe",
"Ember Shot",
"Throwing Knife"
]
},
{
"id": "2",
"question": "Which of these characters in 'Undertale' can the player NOT go on a date with?",
"correct_answer": "Sheik",
"options": [
"Samus",
"Sheik",
"Lucas",
"Mega Man"
]
},
{


In Magic: The Gathering, what card's flavor text is 'Catch!'?
"Stone-Throwing Devils",
"Lava Axe",
"Ember Shot",
"Throwing Knife"
"Which of these characters in 'Undertale' can the player NOT go on a date with?",
"Samus",
"Sheik",
"Lucas",
"Mega Man"
Submit