Lab 06
React Review & Cookie

Software Studio

DataLab, CS, NTHU

2017 spring

Outline

- React
- Http request
- Cookie
- Today’s Mission

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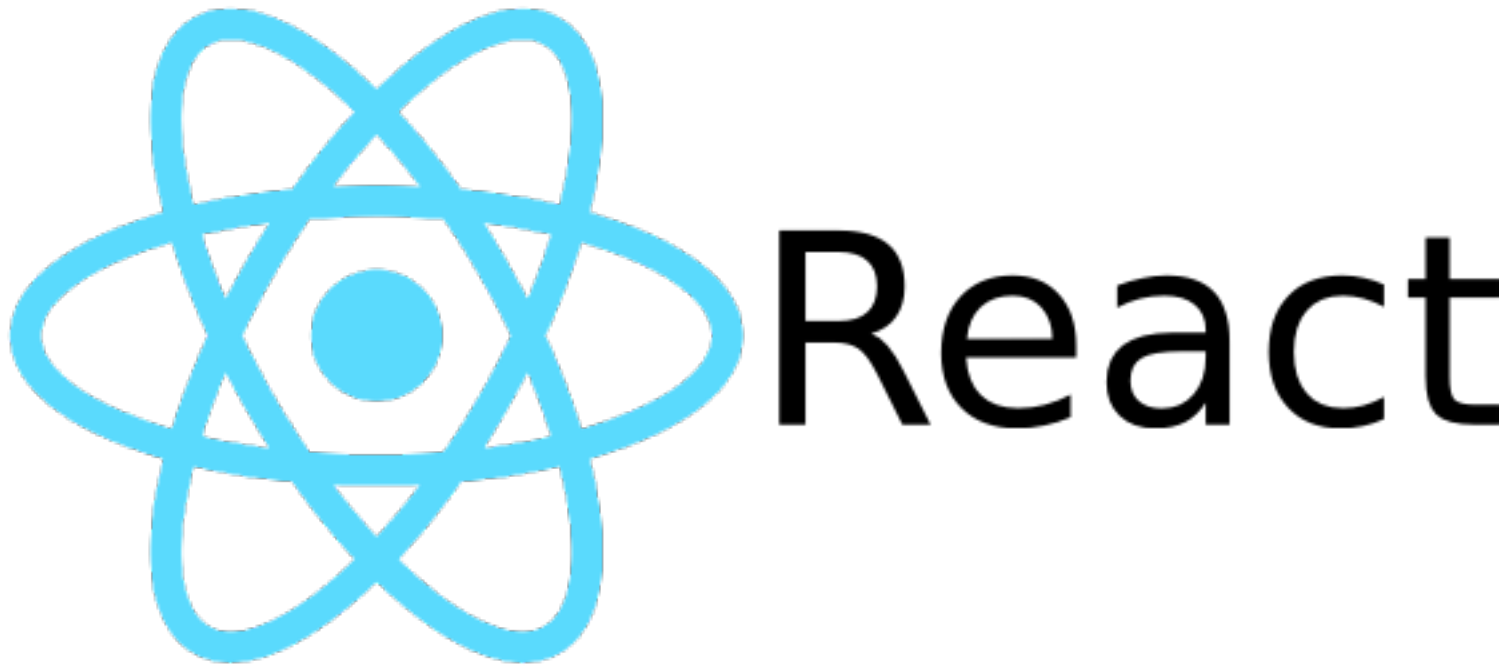

React

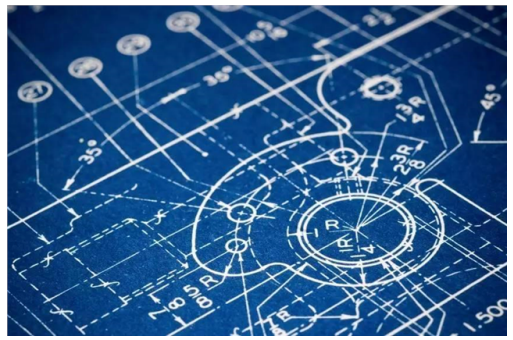
React

- Write HTML in JS

```
render() {
    return (
        <div className={`today weather-bg ${this.state.group}`}>
            <div className={`mask ${this.state.masking ? 'masking' : ''}`}>
                <WeatherDisplay {...this.state}/>
                <WeatherForm city={this.state.city} unit={this.props.unit} onQuery={this.handleFormQuery}/>
            </div>
        </div>
    );
}
```

- Component based

OOP



Class

new

Object

Object.method()

Object.property

圖片來源 / ShutterStock / GigCasa.com

Component based in React

- Use Class

```
export default class WeatherDisplay extends React.Component {
    constructor(props) {
        super(props);
    }
```

- New Object

```
render() {
    return (
        <div className={`today weather-bg ${this.state.group}`}>
            <div className={`mask ${this.state.masking ? 'masking' : ''}`}>
                <WeatherDisplay {...this.state}/>
                <WeatherForm city={this.state.city} unit={this.props.unit} onQuery={this.handleFormQuery}/>
            </div>
```

Think about
How to communicate between components ?
by davejdoe

by David Blackwell

Props

- Read only
- Parent to Child's property

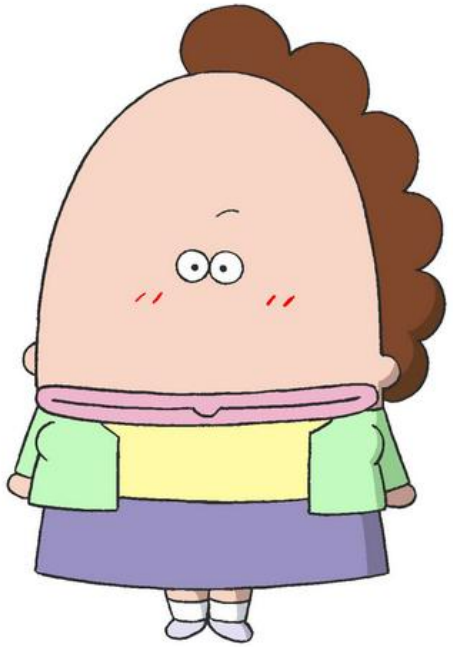
```
ReactDOM.render(
  <div>
    <Component name='Alice'>
    <Component name='Bob'>
  </div>,
  document.getElementById('root');
);
```

```
class Component extends React.Component {
  constructor(props) {
    super(props); ...
  }
  render() {
    return <h2>This is {this.props.name}<h2>;
  }
}
```

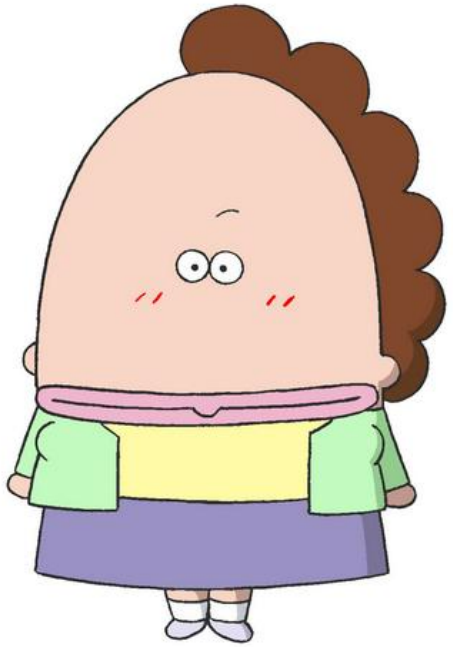
Now, you can let child talk to parent!

props

Parent.method

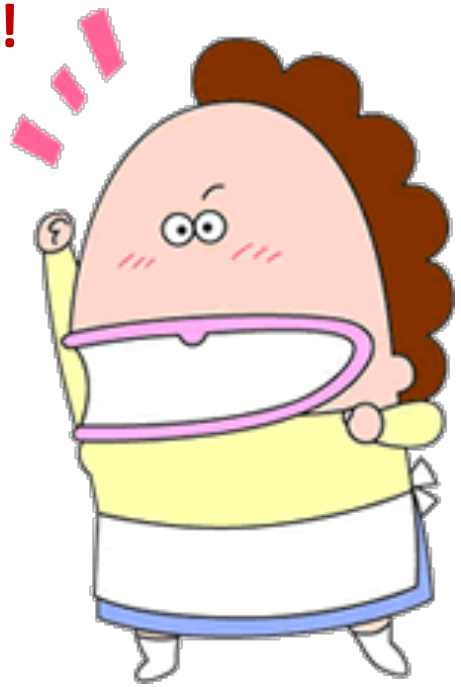


props.method



props.method

Do something!



How about parent talk to child?

State

- Can be modified

```
constructor(props) {
    super(props);

    this.state = {
        ...Today.getInitWeatherState(),
        loading: true,
        masking: true
    };
```

State

- Can be modified
- If state is used in render(), when you call setState(), it will trigger re-render automatically.

```
render() {
    return (
        <div className={`today weather-bg ${this.state.group}`}>
            <div className={`mask ${this.state.masking ? 'masking' : ''}`}>
                <WeatherDisplay {...this.state}/>
                <WeatherForm city={this.state.city} unit={this.props.unit} onQuery={this.handleFormQuery}/>
            </div>
        </div>
    );
}
```

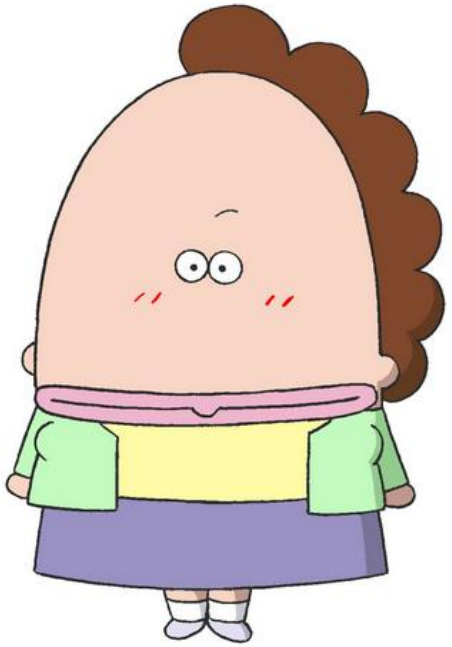
```
getWeather(city, unit) {
    this.setState({
        loading: true,
        masking: true,
        city: city // set city state immediately to prevent input
    }, () => { // called back after setState completes
        getWeather(city, unit).then(weather => {
            this.setState({
                ...weather,
                loading: false
            }, () => this.notifyUnitChange(unit));
        }).catch(err => {
            console.error('Error getting weather', err);

            this.setState({
                ...Today.getInitWeatherState(unit),
                loading: false
            }, () => this.notifyUnitChange(unit));
        });
    });
```

Trigger re-render!!

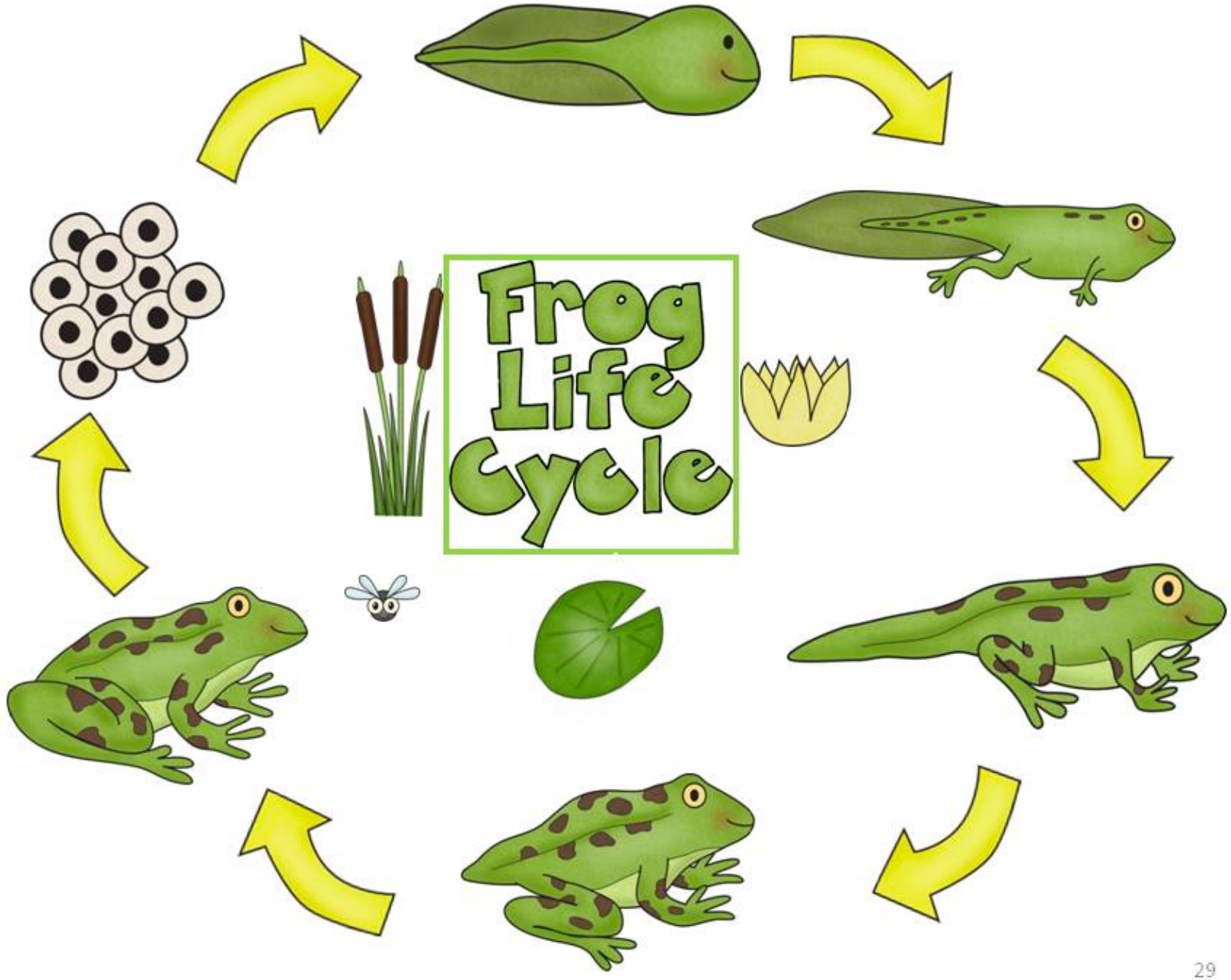
props

Parent.state

setStete()



If I want to let child do some method when re-render?



Created by: Twin Sisters Speech and Language Therapy http://twinsistersspeechandlanguagetherapy.blogspot.com

Component Life Cycle

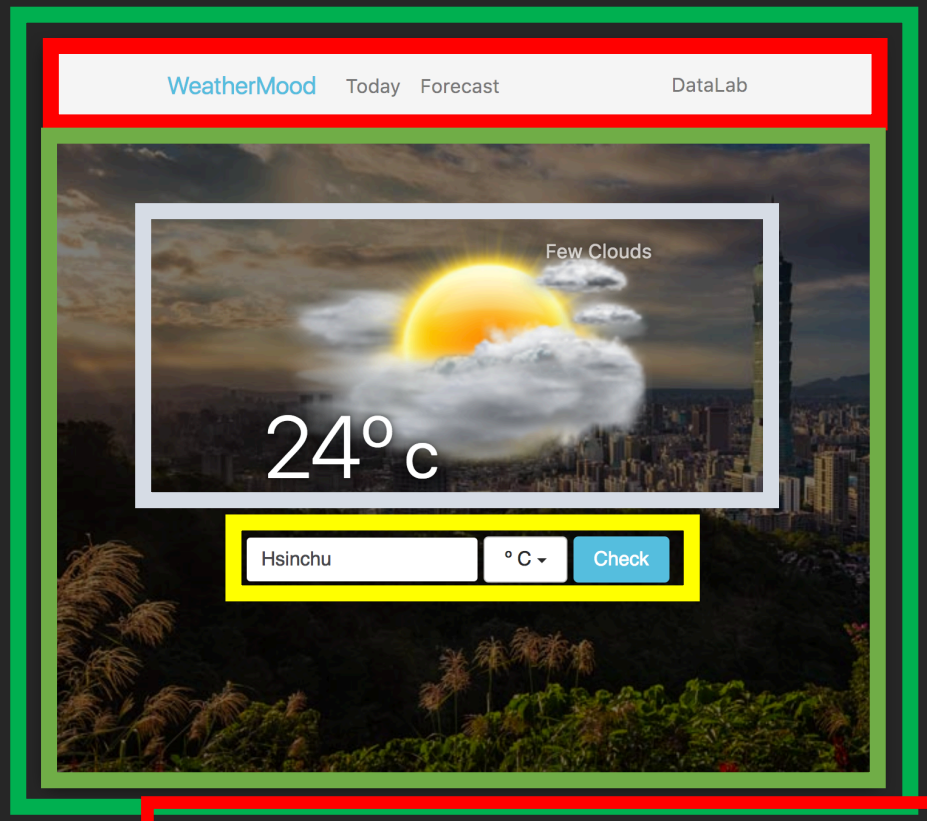
- Life Cycle

```
componentWillReceiveProps (nextProps) {
        // do some method when re-render
        // you can use use nextProps
}
```

Case study

Step 5: Upward Data Flow

Main {
  unit
}



Navbar { ~~link1~~, ~~link2~~ }

WeatherDisplay {
  ~~temp~~, ~~unit~~
  ~~weather~~, ~~desc~~
}

WeatherForm {
  ~~city~~, ~~unit~~
}

Today { weather, temp, desc, city }
Forecast { weather, temp, desc, city }

Case study

- If I want to set city as the same in Today & Forecast ?

- Any Idea?

Outline

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- HTTP Method
- Cookie
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HTTP Method

- OPTIONS
- GET
- HEAD
- **POST**
- **PUT**
- DELETE
- TRACE
- CONNECT

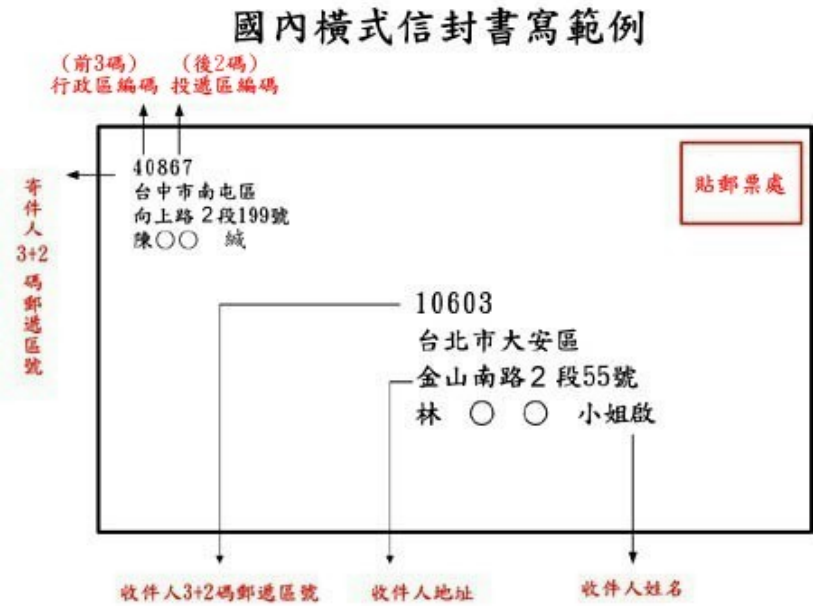
GET

- Append Query String (key/value pair) behind URL.

- **http://api.openweathermap.org/data/2.5/weather?appid=Myid&q=London**

POST

- Put key/value pair in message body.



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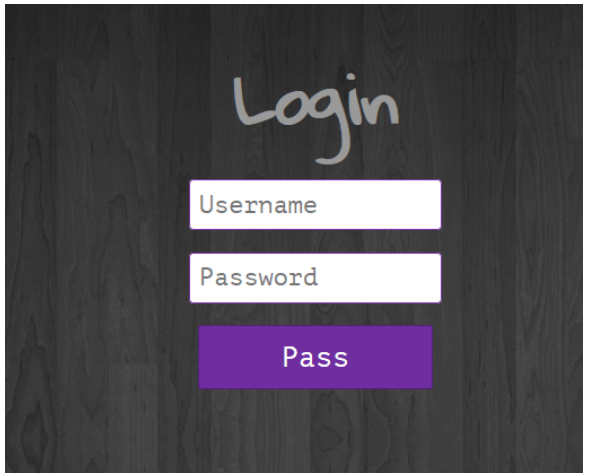
What is cookie?

How do we keep user's info?

You can use Cookie!

Cookie

- **Small** piece of data stored locally.
- String only.
- Expire when turn off the browser.
- name=value;expires=date;path=path;domain=domain;secure



Some constraint

- Too small (only 4KB)
- Pass as http request header
- Not secure

Using cookie via js

```
<script>
    if(navigator.cookieEnabled){
        console.log("網頁的 cookie :" + document.cookie);
    }
    else {
        console.log("不支援Cookie");
    }
</script>
```

```
document.cookie = "123=QQQ";
document.cookie = "123=OuO";
document.cookie = "abc=yaya";

document.write("Cookie 字串: " + document.cookie);
```

123=OuO ; abc=yaya

Using cookie via ReactJs

- react-cookie

- Step 1: npm install xxx
- Step 2: import
- Step 3: use their api call
  - cookie.save(name, val)
  - cookie.load(name)
  - cookie.remove(name)

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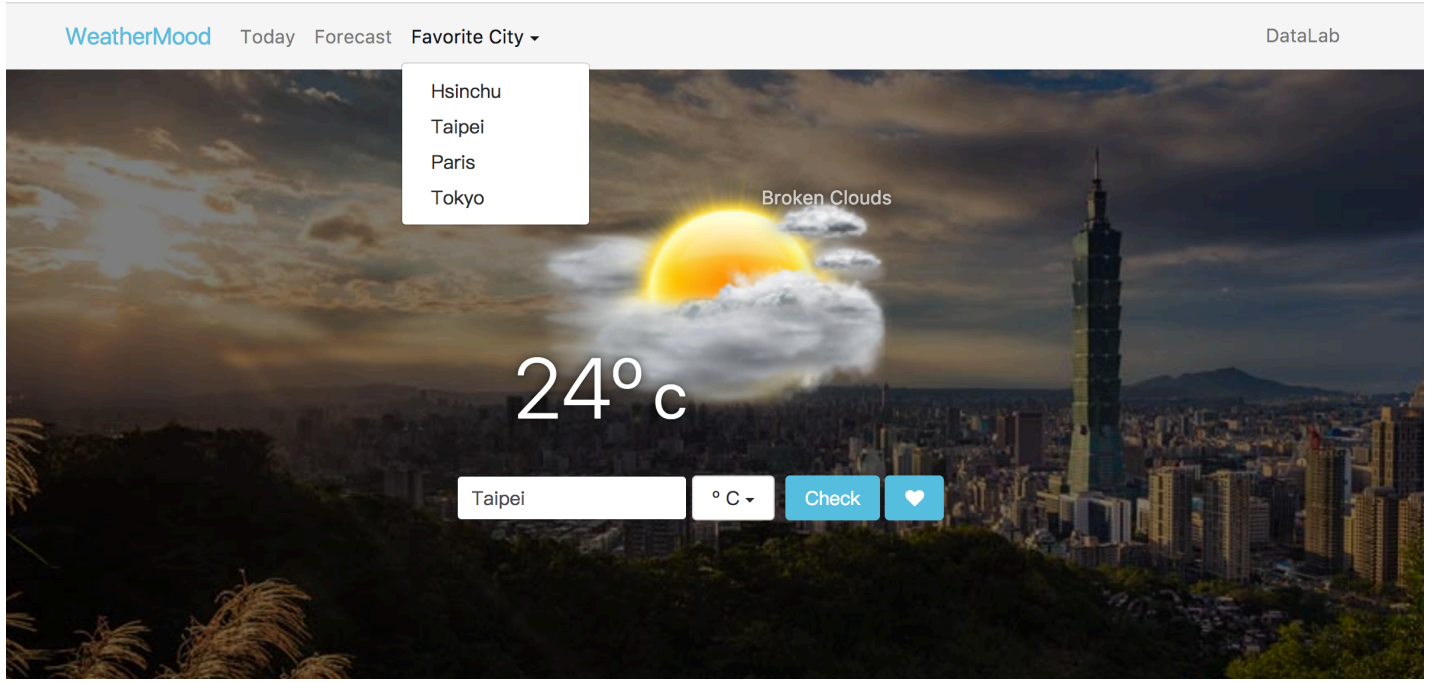
Today’s Mission

- Add a button to store favorite city in cookie.
- Show weather info when the navbar has clicked.
- Deadline 4/12 23:59



Some reminder

- Assignment