

ReactJS : JS lib for building UI
Dedicated,focus, expert lib to create Frontend app

Traditionally



Decouple the backend -& frontend

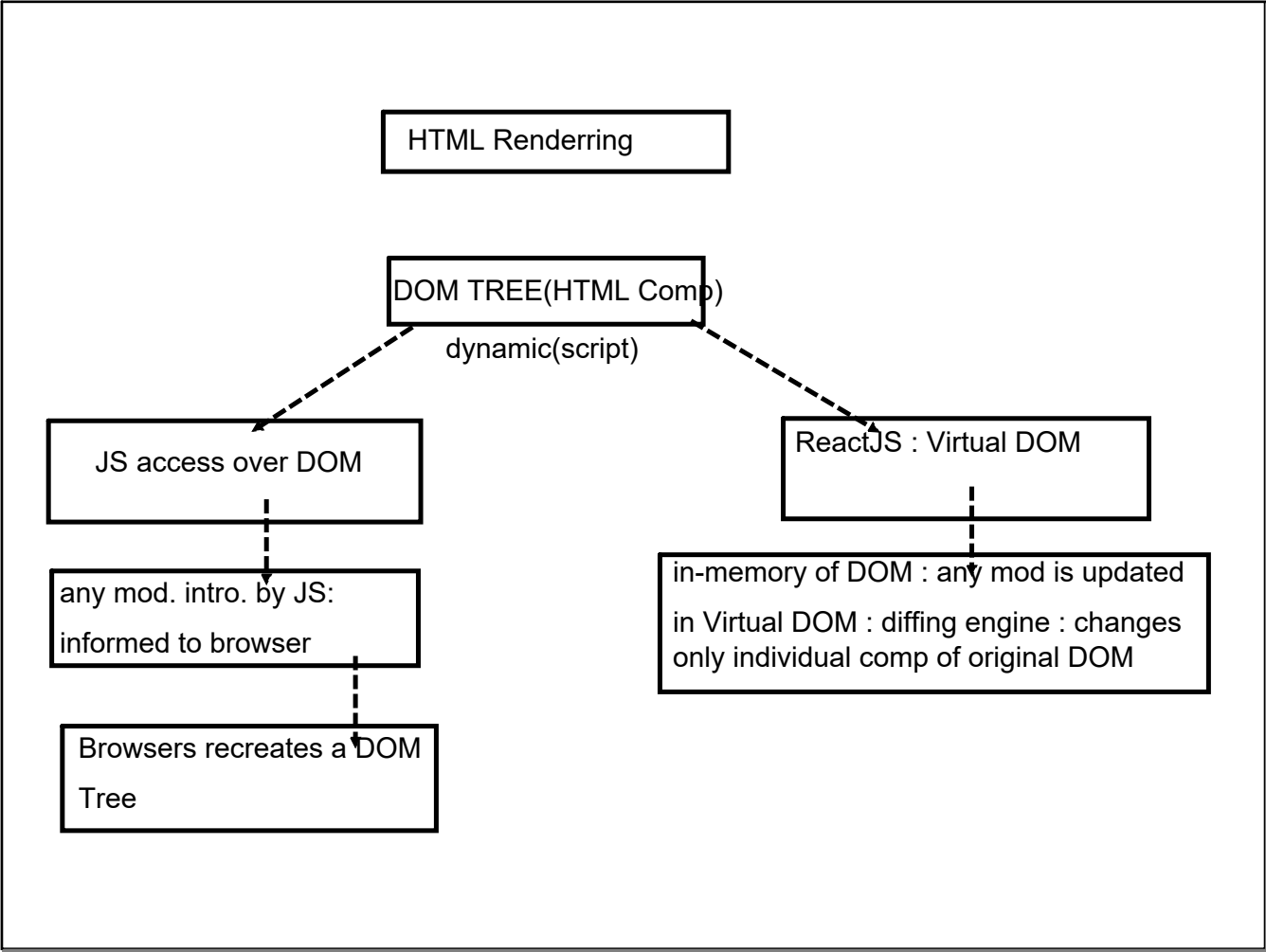
Performance enhancements

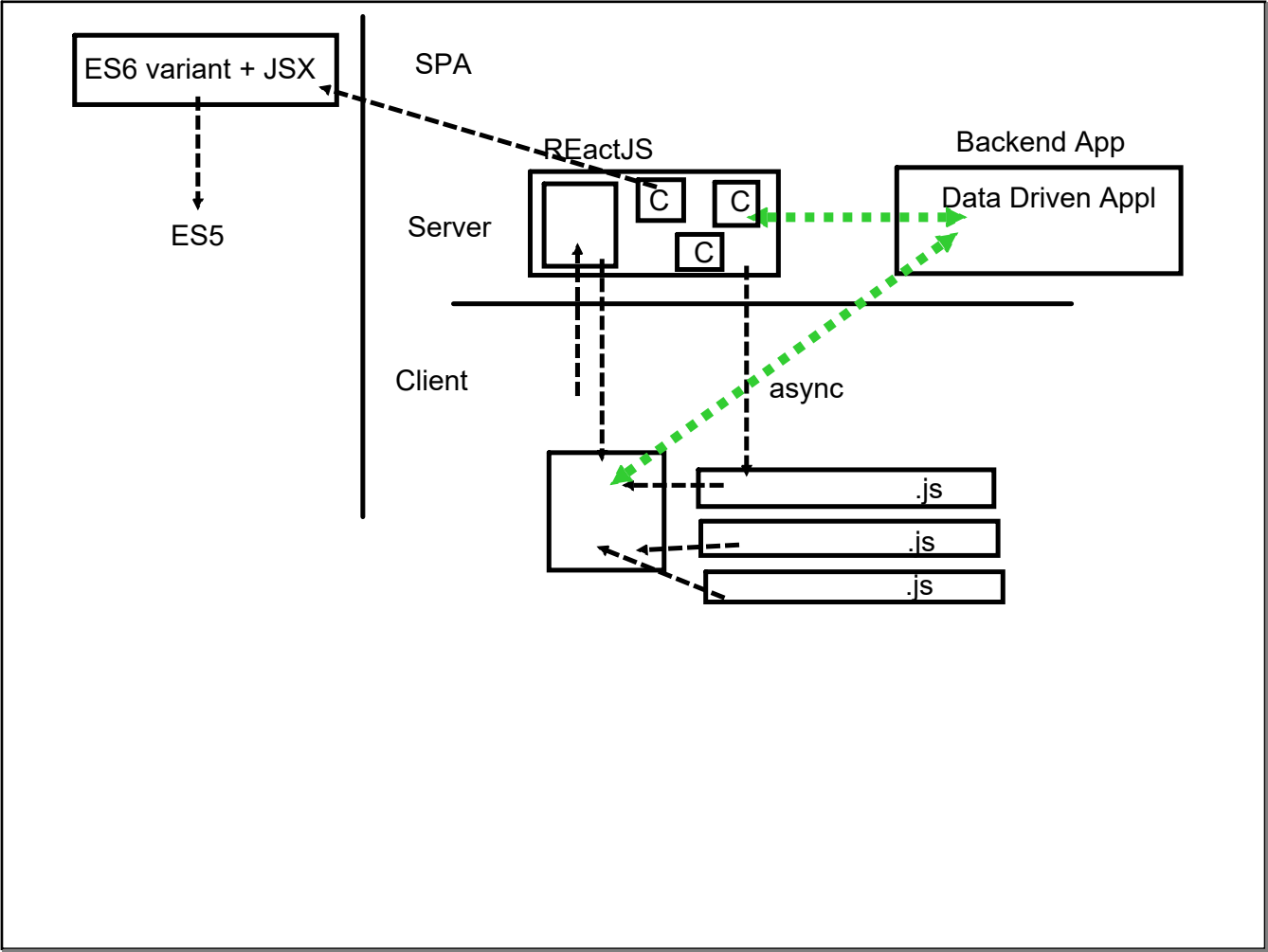
Angular : MVC architecture

ReactJS : V

build large app : data changes frequently with time

DOM Tree : Recreates the DOM tree on every change : Rerendering





Resource Management

complete React JS library is in single file
react.js(version)

Additional lib :

react-dom.js :(virtual DOM)

JS

NodeJS : npm tool (node package manager)
installing new frameworks,api, cli, tool
structure, config
npm initiate any JS

Manual :

Download all lib/api
structure code
add and define config

Auto : Tool by Facebook

create-react-app (cli)

```
>npm i -g <tool-name>
```

```
>npm i -g create-react-app
```

Component based programming : create reusable HTML components (JS logic)

custom HTML tag

Javascript function : generates output every time it is invoked (managed & modelled by Virtual DOM)

Component

Welcome

```
<div>
```

```
  <h2>Welcome</h2>
```

```
  <p> 10:45 AM </p>
```

```
</div>
```

dynamic

After 1 min

Component

Welcome

```
<div>
```

```
  <h2>Welcome</h2>
```

```
  <p> 10:46 AM </p>
```

```
</div>
```

dynamic

Components :

1. Traditional JS : functions
2. ES6 std + JSX (create a class)

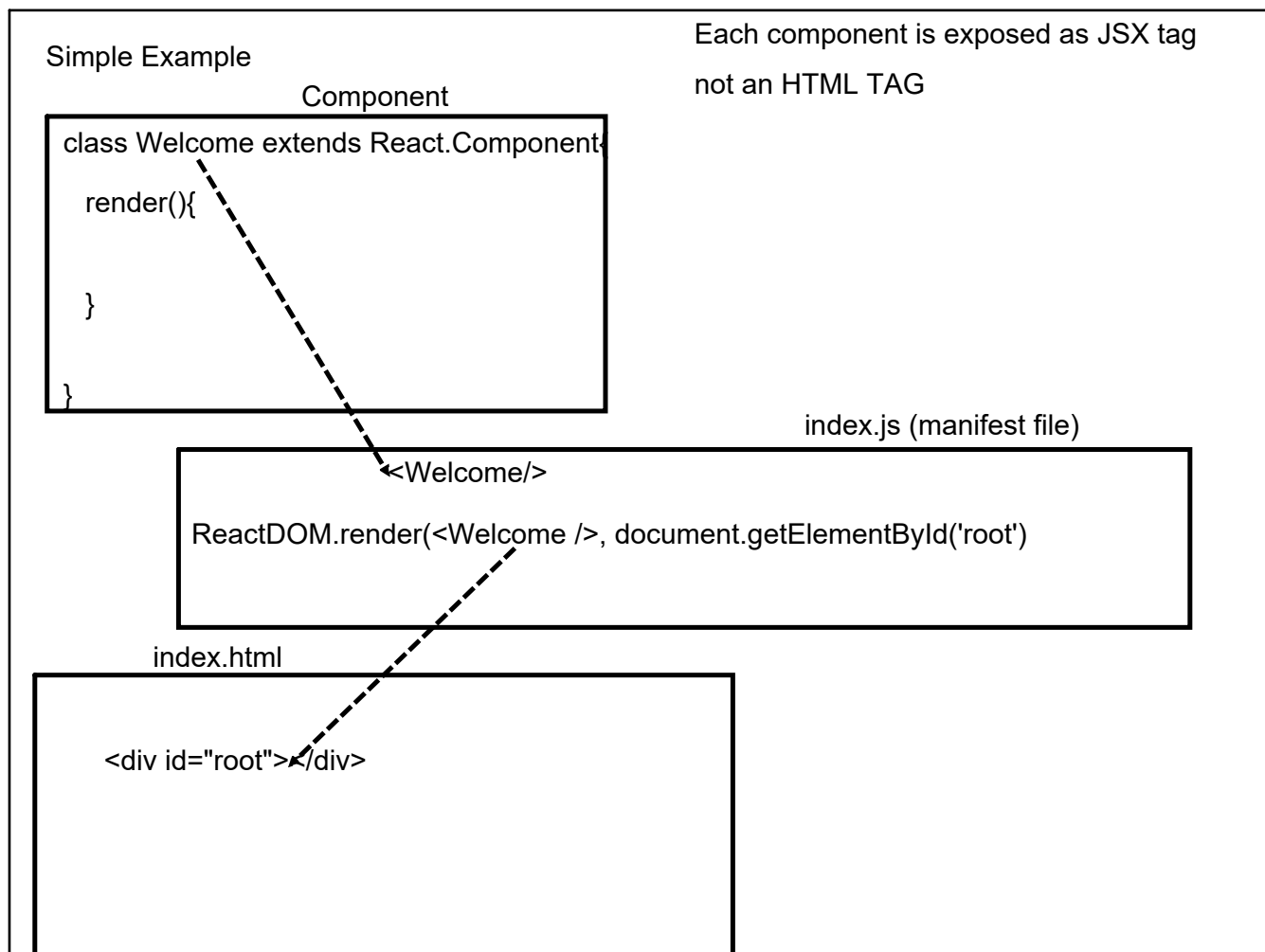
Create a React Application

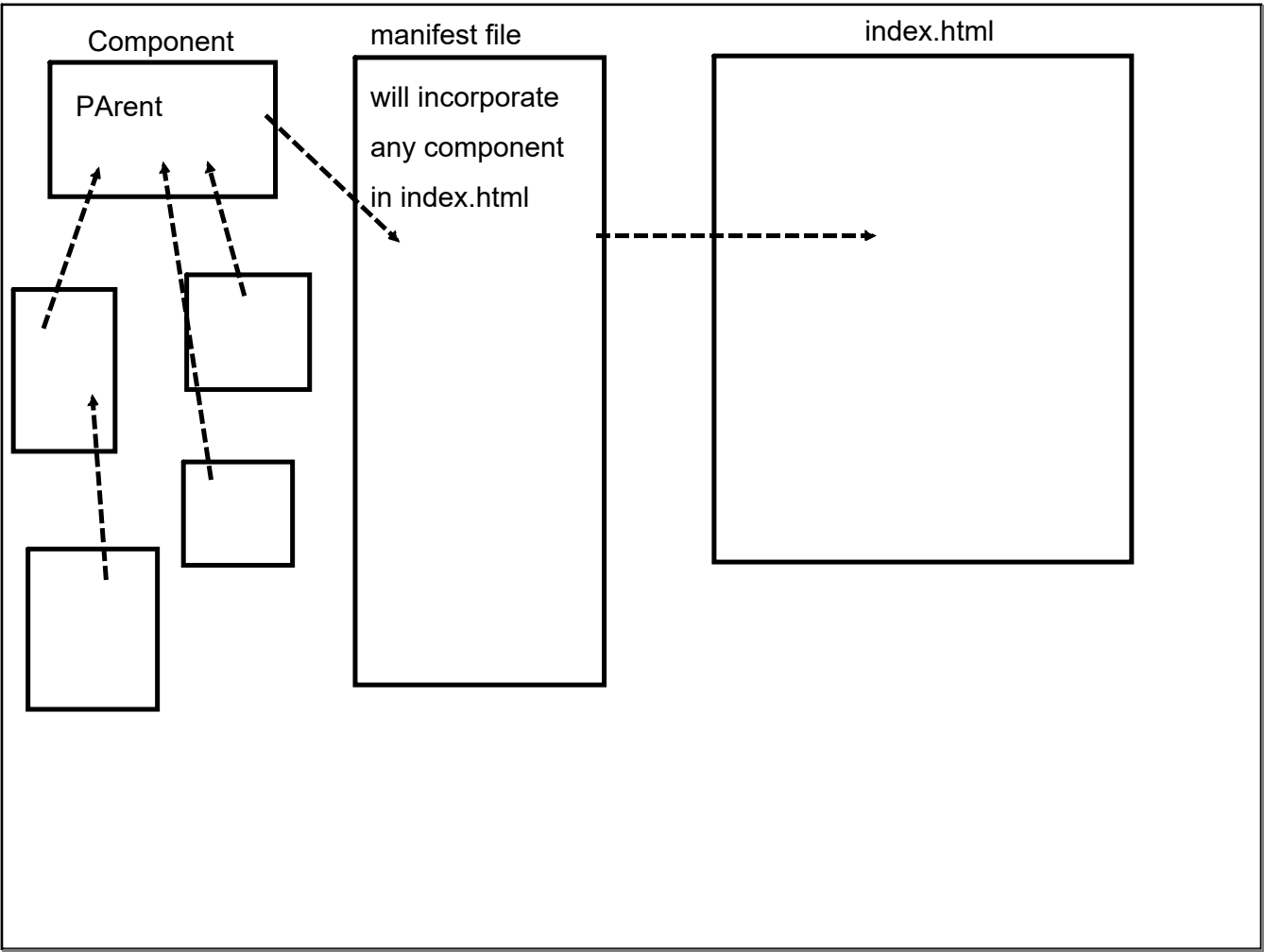
```
>create-react-app <project-name>
```

create a JS class and inherit class React.Component

In package.json : add new lib

```
>npm install
```





```
render(){ // JSX : Javascript & XML
```

```
  return(                                     JSX
```

```
    <div>
      <h2 className="high">Welcome All</h2>
    </div>
```

```
  );
```

```
}
```

babel (transpiler)

Create a HTML on the fly

Resultant JS

```
React.createElement('div', null,
  React.createElement("h2", {className: "high"}, "Welcome All"))
```

```
<div>
  <h2 class="high">Welcome All</h2>
</div>
```

Generated HTML

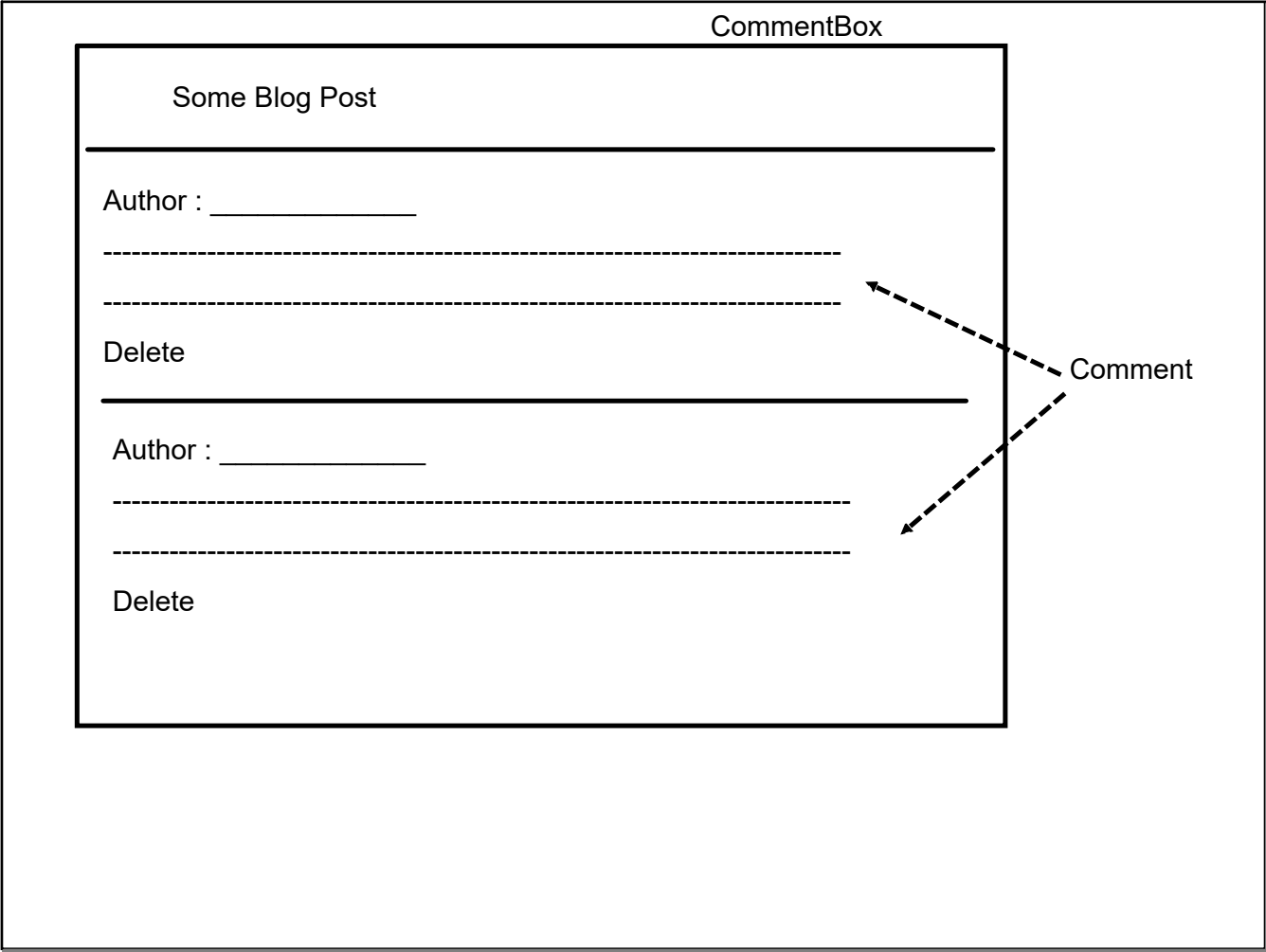
Commenting Engine Use Case

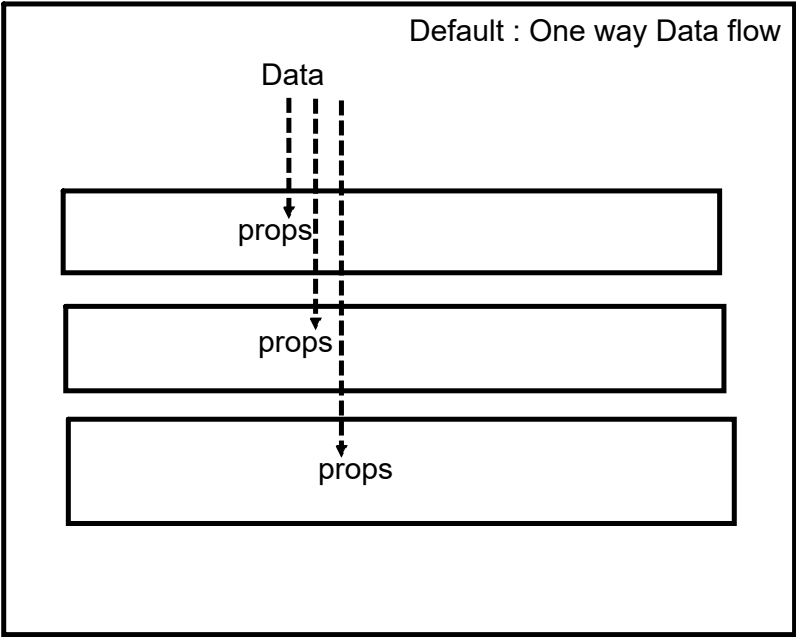
=> Allow visitors to post comments on a blog post

able to show / hide the comments

able to add new comments

delete comments





Each React Component has inbuilt object that hold the props (values passed from parent as attributes)

Child/Any Component can define default values for prop