Episode 5:

* There are two types of exports named exports and default exports.
* A file can have only one default export, but named exports can be many. So if your file has only 1 component to export, one can go with default export. But if there are multiple things to export from a single file, you can go with named exports.
* And the way to do named export is to use the keyword export before the const LOGO\_URL name.
* And again there are two types of imports as well:
  + For default imports one can use the path to import stuff
  + For named imports one should put the name of the export in {}.That is the huge difference.

Default export:

export default Component;

Named export:

export const CONST\_NAME=””;

Default import:

Import Component from “path”;

Named Import:

Import {CONST\_NAME} from “path”;

### Map and filter functions:

**map():**

* **Purpose**: The map() function creates a **new array** by transforming (or mapping) each element in the original array based on a function you provide.
* **How it works**: It **applies the given function to every element** in the array and produces a new array with the results. The length of the new array will always be the same as the original array because map() transforms each element but does not remove any.

### filter():

* **Purpose**: The filter() function creates a **new array** that includes only the elements from the original array that pass a specific condition (or test) defined by a function you provide.
* **How it works**: It applies the function to every element, and only **elements that return true for the given condition are included** in the new array.

**How Event Handlers Work:**

* When an event occurs (e.g., clicking a button), the event handler attached to that event executes, allowing you to perform a specific task in response to the event.
  + Onclick is an event handler that is being used to execute a callback function when a particular button is pressed.
  + So in my app, I am trying to create a button, which clicked upon shows all the top-rated restaurants.

React is faster because it can do faster DOM manipulation, and efficient manipulation.

**React Hooks = utility function:**

**State** is a mechanism that React uses to manage **dynamic data** inside a component. When this data changes, React will automatically **re-render** the component to update the user interface as necessary.

And to make a normal variable a super powerful variable, we use a react hooks.

**A react hook is a normal JS utility function that is given to us by React.**

**A state variable is what you get from a hook.**

**There are 2 major ones:**

**i)useState()=**

**useState** is a special hook that allows you to add state to functional components.

It returns an array containing two values:

1. **The current state** (your state variable).
2. **A function to update the state**.

**to create state variables that represents the state of the component we use useState.**

**To create a state variable we do:**

**const [var] = useState([]);**

**useState is function that gives a state variable, and then it has to be stored in an array.**

**So whatever variable the hook is giving we are storing it in an array. This is how we use a hook.**

  //initializing a normal variable in JS

let listOfres=[];

//to create a state variable

const [listOfres] = useState([]);

**When importing a state hook it is imported as a named import.**

**One can modify the state variable only through a function that is passed as a second argument to the array of the state variable. And by convention, it is names with a prefix set (function).**

**Whenever a state variable updates, the react re-renders the components.**

**ii)useEffect();**

**The differences between a Real DOM and Virtual DOM:**

**The real dom is automatically created by the browsers when loading a web page and Virtual dom is created by frameworks like react.**

**Why is React fast ?**

**React is fast because of it’s effiecient dom manipulation. It does it through virtual dom. React can find out the difference between the virtual doms and update the UI using the diff algorithm.**