

# REACT JS

- REACT IS A FREE AND **OPEN-SOURCE FRONT-END JAVASCRIPT LIBRARY** FOR BUILDING USER INTERFACE BASED ON COMPONENTS.
- REACT JS IS USED FOR **CREATE A SINGLE PAGE APPLICATION**.

## REACT JS COMPONENTS

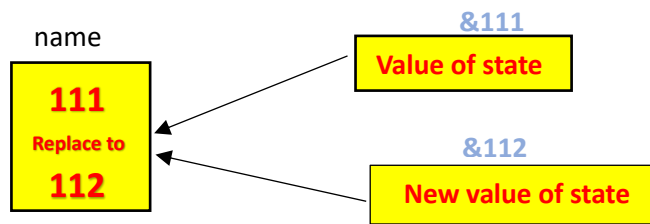
- IN REACT JS COMPONENT IS A FUNCTION WHICH RETURNS **REACT ELEMENT** (ONLY ONE).
- TWO TYPES OF COMPONENTS:-
  1. EXPORT DEFAULT COMPONENT
  2. NAMED EXPORT COMPONENT
- 1. **EXPORT DEFAULT:-** WHEN WE IMPORT THIS COMPONENT THEN WE HAVE TO WRITE WITHOUT CURLY BRACKETS.
  - EXAMPLE:- import React from 'react'.
- 2. **NAMED EXPORT:-** WHEN WE IMPORT THIS COMPONENT THEN WE HAVE TO WRITE WITH CURLY BRACKETS.
  - EXAMPLE:- import { useState } from 'react'.
- **COMPONENT EXAMPLE:-**

```
const App=()=>{  
  return(  
    <>  
      <h1>COMPONENTS</h1>  
    </>  
  )  
}
```

## REACT JS STATE

- STATE IS AN OBJECT IT'S LIKE VARIABLE, BUT IT HAS SOME ADVANCE FEATURES. LIKE WHEN STATE IS CHANGED THEN AUTOMATICALLY RE-RENDER THE COMPONENTS WHERE STATE IS USED.
- **SYNTAX:-** const [ stateName , changeStateMethod ] = useState();
- IF WE USE THE STATE THEN COMPULSORY IMPORT useState FROM React.
  - Import { useState } from 'react';
- **EXAMPLE:-** import { useState } from 'react';  
const [ name, setName ] = useState("");
- WITH setName FUNCTION WE CAN CHANGE THE NAME VALUE. LIKE **setName("Ahmad");**

- WHEN WE CHANGE THE STATE THEN SYSTEM CREATE NEW OBJECT AND LINKED WITH STATE NAME LIKE:-



# REACT JS PROPS

- IN REACT JS PROPS IS AN OBJECT IT USE **TO PASS DATA** FROM PARENT COMPONENT TO CHILD COMPONENT.
- PASS THE PROPS DATA WITH **KEY AND VALUE PAIRS**.
  - SYNTAX:- `<Component key=value key=value />`
  - EXAMPLE:- `<Contact name="Ahmad" contact="7383294925" />`
- GET THE PROPS DATA WITH **DIFFERENT METHODS**.

## 1. WITH (PROPS) KEYWORD:-

i. EXAPMLE:- `const Contact (props) => {  
 return(  
 <>  
 <h1>{props.name}</h1>  
 <h1>{props.contact}</h1>  
 </>  
 );  
}`

## 2. WITH PROPS DESTRUCTURE:-

i. EXAMPLE:- `const Contact (props) =>{  
 const { name, contact }=props;  
 return(  
 <>  
 <h1>{name}</h1>  
 <h1>{contact}</h1>  
 </>  
 );  
}`

**NOTE:-** WE CAN ALSO GIVE NICKNAME OF PROPS LIKE,

EXAMPLE:- `const Contact (props) =>{  
 const { name:myName, contact:mobile }=props;  
 return(  
 <>  
 <h1>{ myName }</h1>  
 <h1>{ mobile }</h1>  
 </>  
 );  
}`

## 3. WITH PROPS DESTRUCTURE INTO FUNCTION ARGUMENT:-

EXAMPLE:- `const Contact ( { name, contact } ) =>{ };`

**NOTE:-** WE CAN ALSO GIVE DEFAULT VALUE OF PROPS WHEN DO NOT GIVE PROPS DATA THEN PRINT THAT VALUE.

EXAPMLE:- `const Contact ( { name="Ahmad", contact="7383294925" } );`

## NOTES:-

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- ❖ **JSX:-** JSX IS A JAVASCRIPT EXTENSION. JSX PROVIDE US TO WRITE JAVASCRIPT LIKE HTML STRUCTURE. BUT JSX IS NOT A HTML. BECAUSE OF CLASSNAME, SELF CLOSING TAGS AND MANY OTHERS.
- ❖ **BABEL:-** BABEL IS A COMPILER OR LIBRARY OR CONVERTER WHICH CONVERT JSX TO JAVASCRIPT.
- ❖ **ELEMENT:-** REACT ELEMENT IS AN OBJECT .
  - EXAMPLE:- **jsx:-** `<h1>Ahmad</h1>`  
**Js:-** `React.createElement("h1",{},{}, "Ahmad");`
- ❖ **NPM:-** - NPM IS A PACKAGE MODULE FOR JAVASCRIPT. NO SPECIFIC FULL FORM OF NPM.