

# IST 363

## LAB 10

### REACT 1

1. paste screenshot here

```
6   const list = [1, 2, 3, 4]; // Assuming this list is meant to be used
7
8   const students = [
9     { suid: 123456, name: 'Sue Flay', year: 'senior', major: 'Applied Data Analytics' },
10    { suid: 234567, name: 'Ella Vader', year: 'junior', major: 'Information Management and Technology' },
11    { suid: 345678, name: 'Chris P Bacon', year: 'junior', major: 'Innovation, Society and Technology' }
12  ];
13
14  function App() {
15    const [count, setCount] = useState(0);
16
17    return (
18      <div>
19        <h1>Student Information</h1>
20        <ul>
21          {students.map((student) => (
22            <li key={student.suid}>
23              <strong>Name:</strong> {student.name} <br />
24              <strong>Year:</strong> {student.year} <br />
25              <strong>Major:</strong> {student.major}
26            </li>
27          ))}
28        </ul>
29      </div>
30    );
  }
```

2. paste screenshot here

```

6   const list = [1, 2, 3, 4]; // Assuming this list is meant to be used
7
8   const students = [
9     { suid: 123456, name: 'Sue Flay', year: 'senior', major: 'Applied Data Analytics' },
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12  ];
13
14  function App() {
15    const [count, setCount] = useState(0);
16
17    return (
18      <>
19        <div>
20          <h1>Student Information</h1>
21          <ul>
22            {students.map((student) => (
23              <li key={student.suid}>
24                <strong>Name:</strong> {student.name} <br />
25                <strong>Year:</strong> {student.year} <br />
26                <strong>Major:</strong> {student.major}
27              </li>
28            ))}
29          </ul>
30        </div>

```

3. paste screenshot here

```

15  function App() {
16    return (
17      <div>
18        <h1>Two Components</h1>
19        <Students />
20      </div>
21    );
22  }
23
24  function Students() {
25    return (
26      <div>
27        <ul>
28          {students.map((student) => (
29            <li key={student.suid}>
30              <strong>Name:</strong> {student.name} <br />
31              <strong>Year:</strong> {student.year} <br />
32              <strong>Major:</strong> {student.major} <br />
33            </li>
34          ))}
35        </ul>

```

4. paste screenshot here

```
64 function App() {
65   const logMessage = (message) => {
66     console.log(message);
67   };
68
69   return (
70     <div>
71       <h1>Interactive Data Search</h1>
72       <button onClick={() => logMessage('Hello World!')}>
73         Click Me
74       </button>
75     </div>
76   );
77 }
78
79 export default App;
80
```

5. paste screenshot here

```
const students = [
  { suid: 123456, name: 'Sue Flay', year: 'senior', major: 'Applied Data Analytics' },
  { suid: 234567, name: 'Ella Vader', year: 'junior', major: 'Information Management and Technology' },
  { suid: 345678, name: 'Chris P Bacon', year: 'junior', major: 'Innovation, Society and Technology' }
];

const filteredStudents = students.filter(student => student.name === 'Sue Flay');
console.log(filteredStudents);
```

6. write brief answers to the questions below

a. React is a JavaScript library for building user interfaces. It is used to build single-page applications and allows us to create reusable UI components. Components are independent and reusable bits of code. They serve the same purpose as JavaScript functions, but work in isolation and return HTML. They are basically like functions that return HTML elements.

b. It tells the difference between an HTML tag and a component instance

c. JSX is an extension of JavaScript used in React but does a lot of similar HTML functions. JSX is compiled into JavaScript functions while HTML attributes are replaced with React syntax

d. class is already a defined word in JavaScript, so React uses className to properly render CSS classes

e. you wrap them in {}

f. it makes code easier to read and reuse. Every reasoning for usage can be categorized and better understood

g. if a component becomes too large or takes on too much. It is helpful to divide everything up per what its concern is

h. Yes, they can each behave differently if you render it with different props

i. it uses controlled components for form elements, and manage the value of them using the component's state. That way, React controls the form data

