

DEPARTMENT OF CSE
COURSE CODE: 23SDCS12A / 23SDCS12R
FULL STACK APPLICATION DEVELOPMENT

Date of the Session: ____ / ____ / ____

Time of The Session: ____ to ____

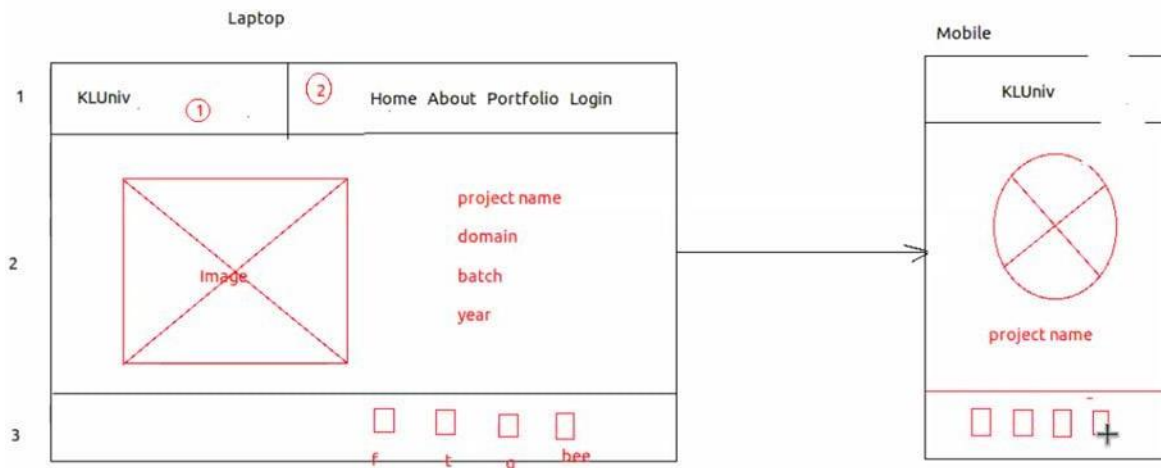
LAB – 2 → Development of responsive frontend for system and mobile View**Prerequisites:**

Knowledge on the HTML elements and styling

Exercise:

This Product Directory allows users to view product details in a grid layout on larger screens and in a single-column list view on smaller screens. It will dynamically fetch employee data from the database and adjust the layout based on the screen size. So that, to create a **responsive front end** that display data and adapts to both **desktop** and **mobile** views.

The view may be like the below one,



index.html

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <link rel="icon" type="image/svg+xml" href="/vite.svg" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">

    <title>Vite + React</title>
  </head>
  <body>
    <div id="root"></div>
    <script type="module" src="/src/main.jsx"></script>
  </body>
</html>
```

❖ Image download:

<https://m.media-amazon.com/images/I/61Qe0euJJZL. AC UF1000,1000 QL80 FMwebp .jpg>

❖ Image save and rename as laptop

❖ Watch The Video And Do In Visual Studio https://youtu.be/b9gPPc_Bn64?si=FgTdXKbvQJqUr9Lz

Template.jsx

```
import laptop from './laptop.jpg'
import './style.css'

function Template() {
  return (
    <div className="container">
      <div className="header">
        <div className="heading">KL UNIVERSITY</div>
        <div className="menu">
          <span>Home</span>
          <span>About</span>
          <span>Portfolio</span>
          <span>Login</span>
        </div>
      </div>
      <div className="content">
        <div className="plogo">

        <img src={laptop} alt="No Image" width={100} height={100} />
        </div>
        <div className="pdetails">
          <div className="pname">Product Name</div>
          <div className="pother">
            <p>Product description</p>
            <p>Rs. 1000</p>
            <p>2024</p>
          </div>
        </div>
      </div>
    </div>
  )
}
```

```
<div className="footer">
  <div className="slogo">
    <i className="fa fa-facebook"></i>
    <i className="fa fa-twitter"></i>
    <i className="fa fa-google"></i>
    <i className="fa fa-youtube"></i>
  </div>
</div>
</div>
);
}
```

```
export default Template;
```

main.jsx

```
import { StrictMode } from 'react';
import { createRoot } from 'react-dom/client';
import './index.css';
import App from './App.jsx';
import Template from './components/ex1/Template.jsx';

createRoot(document.getElementById('root')).render(
  <StrictMode>
    <Template />
  </StrictMode>,
);
```

style.css

```
.container {  
  border: 1px solid green;  
  width: 93vw;  
}
```

```
.header {  
  display: flex;  
  padding: 10px;  
  border: 1px solid red;
```

```
}
```

```
.heading{  
  flex: -1;  
}
```

```
.menu{  
  flex: 2;  
}
```

```
.menu span{  
  margin-left: 20px;  
}
```

```
.content{  
  display: inline-flex;
```

```
}
```

```
.plogo{  
  flex: 1;
```

```
}
```

```
.pdetails{  
  flex: 2;  
  margin-left: 50px;  
}
```

```
.footer{
```

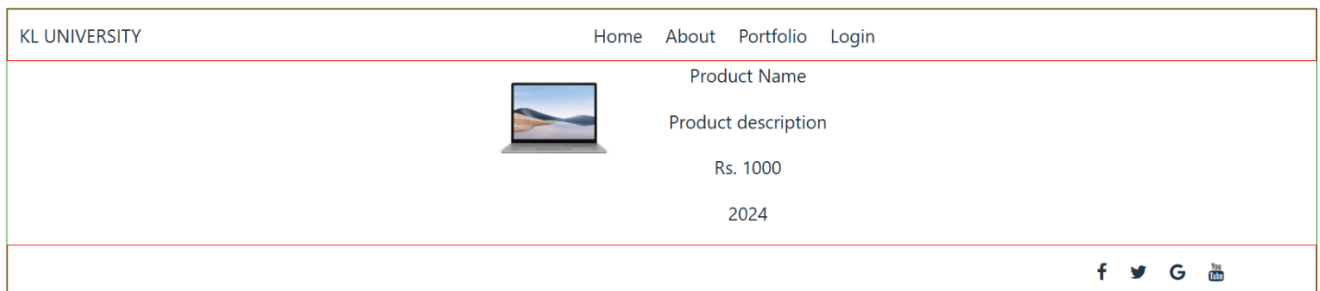
```
border: 1px solid red;
}
.slogo{
padding: 10px;
text-align: right;
margin-right: 50px;

}
.slogo i{

margin-right: 20px;

}
```

Output



VIVA QUESTIONS:

1. How does the className attribute work in JSX, and why isn't it just class like in HTML?

- In JSX, `className` is used because `class` is a reserved keyword in JavaScript.
- It allows assigning CSS classes to elements in a React-friendly way.

2. What are dynamic classes, and how can you add them based on state in React?

- Dynamic classes change based on the component's state or props.
- Use conditional expressions like `className={isActive ? "active" : "inactive"}`.

3. How do CSS preprocessors like Sass or LESS integrate with React?

- Preprocessed CSS files are compiled into standard CSS.
- Import the compiled CSS into React components using `import './styles.css'`.

4. Explain the concept of scoped CSS in React and how you can achieve it.

- Scoped CSS limits styles to specific components.
- Achieve it using CSS Modules (`styles.module.css`) or styled-components.

5. What are styled-components, and how do they differ from inline styles or external stylesheets?

- Styled-components allow writing CSS-in-JS.
- They create unique class names, avoiding global style conflicts.

(For Evaluator's use only)

<u>Comment of the Evaluator (if Any)</u>	<u>Evaluator's Observation</u>
	Marks Secured _____ out of 50
	Full Name of the Evaluator:
	Signature of the Evaluator Date of Evaluation: