React Lab Manual

☛ **Create a TODO application in react with necessary components and deploy it into github.**

Solution :

Step 1: Set Up the Project

Our first task is to set up the React project. This step involves creating the necessary project structure. Here's how you can do it:

1. Create a React App:

Open your terminal and navigate to your preferred directory. Run the following command to generate a new React app. Replace **"todo-app"** with your desired project name:

```
npx create-react-app todo-app
```

This command will create a directory named "todo-app" with all the initial code required for a React app.

2. Navigate to the Project Directory:

Change your working directory to the "todo-app" folder:

```
cd todo-app
```

3. Start the Development Server:

Launch the development server with the following command:

```
npm start
```

This will open your React app, and you�ll see the default React starter page in your web browser at *'http://localhost:3000'*.

Step 2: Create the App Component

In this step, we create the App component, which serves as the entry point to our Todo List application.

```
import React from'react';
import TodoList from'./components/TodoList';
function App() {
return (
<div className="App">
<TodoList />
</div>
 );
}
exportdefault App;
```

Step 3: Create the TodoList

src->Component

Now, let's create the 'TodoList' component, which is responsible for managing the list of tasks and handling task-related functionality.

```
import React, { useState } from 'react';
import TodoItem from './TodoItem';

function TodoList() {
const [tasks, setTasks] = useState([
 {
id: 1,
text: 'Doctor Appointment',
completed: true
 },
 {
id: 2,
text: 'Meeting at School',
completed: false
 }
 ]);

const [text, setText] = useState('');
function addTask(text) {
const newTask = {
id: Date.now(),
 text,
completed: false
 };
 setTasks([tasks, newTask]);
 setText('');
 }
function deleteTask(id) {
 setTasks(tasks.filter(task => task.id !== id));
 }
function toggleCompleted(id) {
 setTasks(tasks.map(task => {
if (task.id === id) {
return {task, completed: !task.completed};
 } else {
return task;
 }
 }));
 }
return (
<div className="todo-list">
 {tasks.map(task => (
<TodoItem
 key={task.id}
 task={task}
 deleteTask={deleteTask}
 toggleCompleted={toggleCompleted}
 />
 ))}
<input
 value={text}
 onChange={e => setText(e.target.value)}
 />
<button onClick={() => addTask(text)}>Add</button>
</div>
 );
}
exportdefault TodoList;
```

Step 4: Create the place the TodoItem in

src->Component

In this step, we create the 'TodoItem' component, which represents an individual task in our Todo List.

```
import React from'react';
function TodoItem({ task, deleteTask, toggleCompleted }) {
function handleChange() {
 toggleCompleted(task.id);
 }

return (
<div className="todo-item">
<input
 type="checkbox"
 checked={task.completed}
 onChange={handleChange}
 />
<p>{task.text}</p>
<button onClick={() => deleteTask(task.id)}>
 X
</button>
</div>
 );
}
exportdefault TodoItem;
```

These three components, 'App', 'TodoList', and 'TodoItem', work together to create a functional Todo List application in React. The 'TodoList' component manages the state of the tasks, and the 'TodoItem' component represents and handles individual tasks within the list.

Step 5: Styling

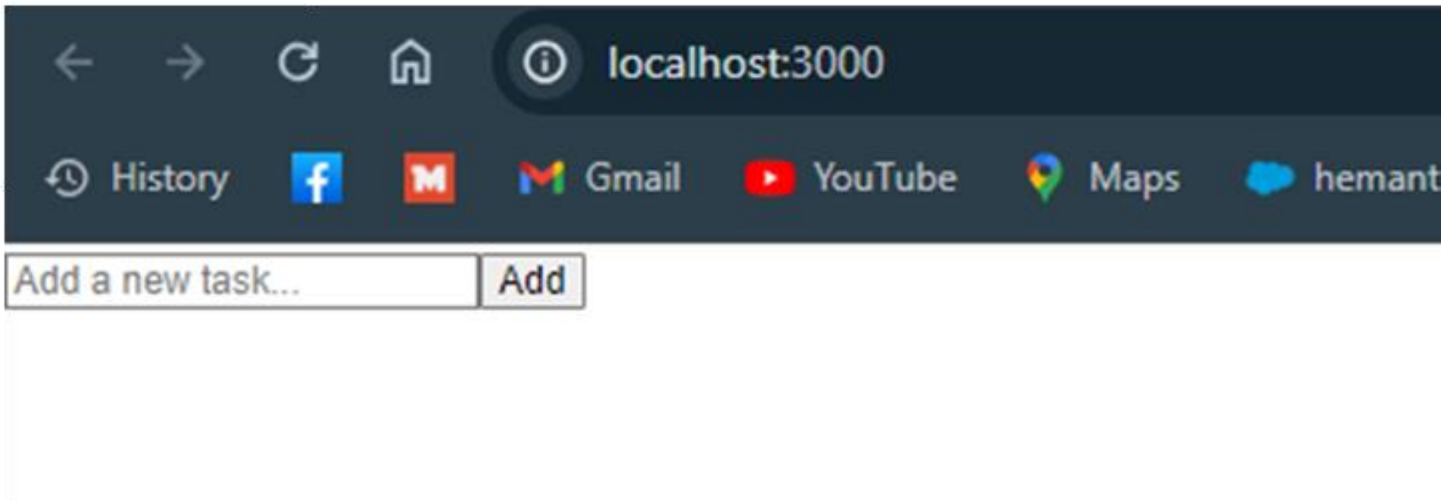
To enhance the visual appeal of your Todo List, you can apply some basic styling. Here�s an example of how you can style the todo items. In the `App.css` file, add the following styles:

```css
.todo-item {
display: flex;
justify-content: space-between;
margin-bottom: 8px;
}
.todo-itemp {
color: #888;
text-decoration: line-through;
}
```

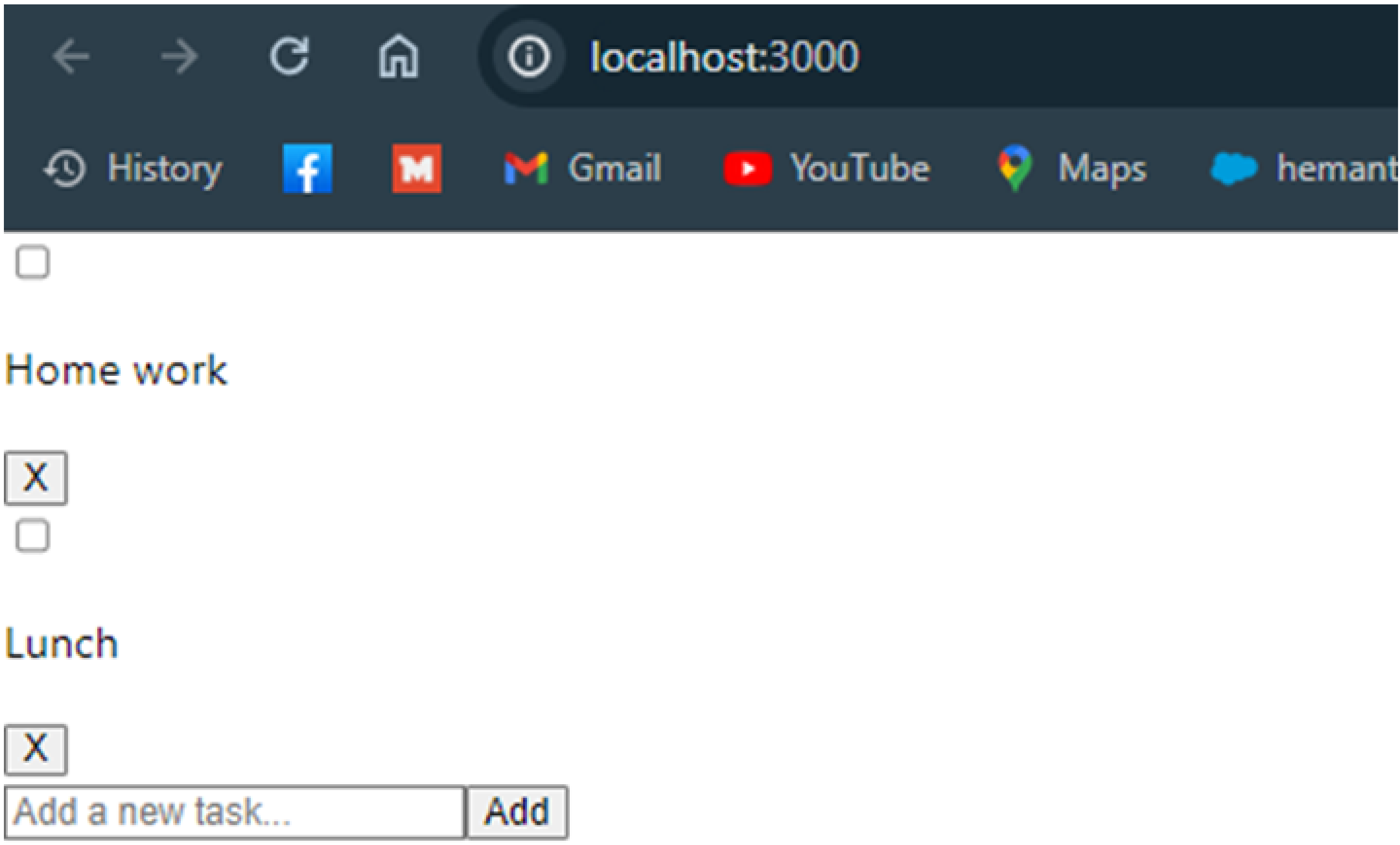
Your output should look like this:

Output :

Initially it looks like:



Next,



Home work

X

Lunch

X

Add a new task...

Add