# Dynamic User Interface Application Documentation

1. Introduction

This document provides a Data Flow Diagram (DFD) representation of the Dynamic User Interface React application.

It describes how user authentication and UI state updates are managed dynamically.

2. System Overview

The React application consists of the following key components:

- App.js: The main file that contains login functionality and dynamic UI updates.
- useState Hook: Manages user authentication state and input handling.
- App.css: Provides styling for UI elements.

3. Data Flow Diagram (DFD)

Level 0 (Context Diagram)

At a high level, the system consists of external users interacting with a login page.

External Entities:

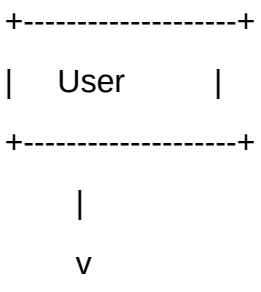
- User: Provides login credentials.

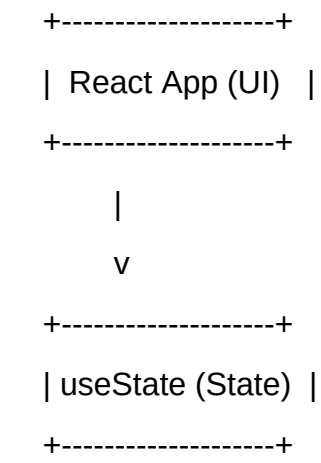
Processes:

- React Application: Handles login verification and updates UI dynamically.

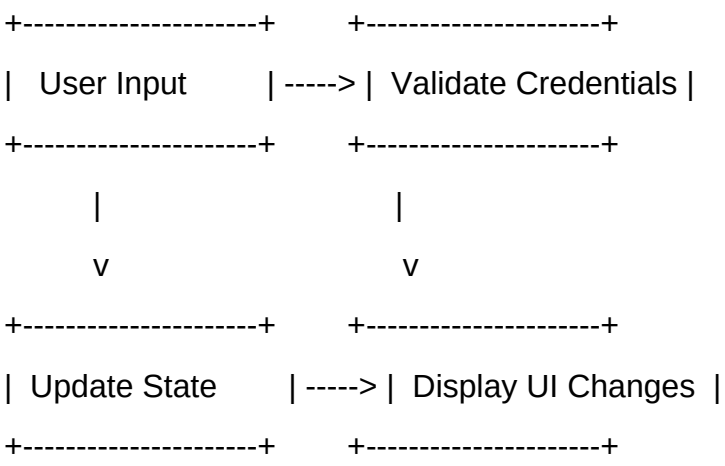
Data Stores:

- useState Hook: Stores login state and user input.





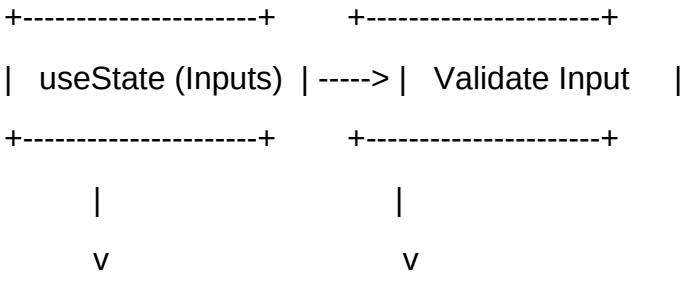

4. Level 1 DFD (Authentication Process Breakdown)

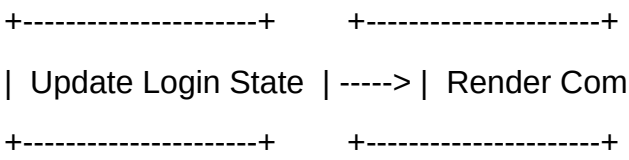



Process Explanation:

1. The user enters a username and password.
2. The application validates the credentials.
3. If valid, the login state is updated and the UI changes to welcome the user.
4. If invalid, an alert is displayed.

5. Level 2 DFD (Detailed State Management)






6. Explanation of Data Flow

1. The user interacts with the login form.

2. The entered credentials are stored in state using useState.

3. The application checks if the credentials match predefined values.

4. If correct, the state updates and a welcome message appears.

5. If incorrect, an alert notifies the user of invalid credentials.

7. Conclusion

This document outlines the data flow in a React-based login system.

The application dynamically updates the UI based on user input and authentication status.