DIF Software Development Training Curriculum

Training Goal:
To equip learners with intermediary industry-relevant software development skills, focusing on performance optimization, and portfolio development to prepare them for senior-level or specialized roles.

Training Overview
- **Duration:** 9 Weeks (Online)
- **Target Audience:** Previous graduates of foundational software development training
- **Training Hours:** 4 hours/week

Week-by-Week Curriculum Table

Week	Topic	Learning Objectives	In-Class Activity	Weekly Task (To-Do)
Week 1	**Introduction to JavaScript & Modern Syntax**	Understand JS basics: variables, functions, ES6 syntax	Code warm-up: build a calculator with ES6	Complete a quiz app using template literals & arrow functions
	DOM Manipulation & Events	Learn how to interact with HTML using JavaScript	Create a to-do list using DOM and event listeners	Build a simple task manager that adds/removes DOM elements
Week 2	**Working with APIs (Fetch & JSON)**	Understand HTTP requests and parsing data	Consume a public API and render data on the page	Fetch data from a weather API and display it dynamically
	Introduction to Version Control (Git & GitHub)	Learn Git commands and how to collaborate on GitHub	Initialize a project repo and push code to GitHub	Complete a mini project and submit via GitHub with README
Week 3	**Introduction to React.js**	Learn how to build components and manage props/state	Build a simple React counter app	Create a basic profile card app with props and state
	React Forms & Events	Handle form data and user input in React	Build a contact form with validation	Create a feedback form that stores input in state

Week 4	React Routing & Single Page Applications	Learn how to use react-router-dom for navigation	Create a 3-page app with routing (Home, About, Contact)	Expand app with nested routes and 404 page
	Styling in React (CSS, Styled Components)	Apply CSS and learn styled-components basics	Style a product page using styled-components	Restyle previous apps using either external CSS or styled-components
Week 5	Component Reusability & State Lifting	Learn how to structure reusable components	Refactor app using reusable input and button components	Build a form with reusable fields and lift state
	Introduction to State Management	Understand useState vs useContext for managing state	Use useContext for theme switching (dark/light)	Implement theme toggle using global state
Week 6	Debugging & Developer Tools	Learn how to debug using browser tools and React DevTools	Debug a buggy app and fix issues live	Identify and fix 3 bugs in a given project
	Introduction to Testing	Understand unit testing using Jest basics	Write simple unit tests for utility functions	Add 3 test cases to a React component using Jest
Week 7	Responsive Design & Media Queries	Make web apps mobile-friendly using media queries	Build a responsive layout for a blog post	Refactor previous project for mobile and tablet breakpoints
	Deploying Apps with Netlify & Vercel	Learn to host and deploy apps online	Deploy a React app live using Vercel or Netlify	Submit deployed link and update GitHub README
Week 8	Working with Forms & APIs in React	Connect forms to APIs and handle loading/errors	Build a newsletter sign-up form with API integration	Add form validation and loading states to form
	Portfolio Building & Project Planning	Plan personal project and set up portfolio	Review portfolios (Behance, GitHub Pages) + brainstorming	Write project proposal + portfolio layout
Week 9	Capstone Project Build	Build a complete app from scratch (React + API + CSS)	Live mentoring and feedback loops	Finalize MVP version of project

	Project Demo & Presentation	Showcase final projects and share learnings	Demo Day: Present project to mentors and peers	Submit final GitHub repo + live link + short write-up