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CodeGenius

Unlocking the Secrets of Programming

PROGRAM OUTLINE

Program Outline**:**

Web Development with REACT and learn How to use ChatGPT

Duration:

2.5 Months

Unlock the power of dynamic web development with REACT and harness the capabilities of ChatGPT to create interactive and intelligent web applications. This comprehensive Program is designed for both beginners and intermediate programmers looking to master the art of crafting web solutions that seamlessly blend the functionality of REACT scripting and the conversational abilities of ChatGPT.

Throughout this Program, you will embark on an immersive journey into the world of web programming, learning how to leverage REACT's versatile features to build robust backend systems, while also integrating ChatGPT to infuse your applications with natural language understanding and generation. The Program covers a range of topics that empower you to create dynamic, user-friendly, and responsive web applications.

Learning Outcomes

Understand and apply core concepts of REACT programming, including variables, data types, operators, conditional statements, loops, functions, and forms, to create dynamic web content and user interactions. Database Integration: Establish database connectivity using REACT, Node.js and MongoDB, allowing students to store, retrieve, and manipulate data within web applications.

Program Content

Module 1: Introduction to Web Development

- HTML5 fundamentals (structure, tags, semantic elements)
- CSS3 basics (selectors, properties, styling)
- Building a simple webpage using HTML and CSS
- Introduction to responsive web design
- Advanced HTML5 features (forms, audio, video, canvas)
- CSS3 transitions and animations
- Introduction to JavaScript (variables, data types, operators)
- DOM manipulation with JavaScript
- JavaScript events and event handling

Module 3: Introduction to React

- Setting up a local development environment (XAMPP, WAMP, or others)
- REACT syntax and basic data types.
- Advantages of React JS
- Work flow of React JS
- REACT functions and user-defined functions.
- Difference between JS and JSX.
- Setup Controlled and Uncontrolled form components.
- Control Input elements.
- How to set default values on all formats of Input elements.
- Integration of React-cookie overview.
- Handling file uploads and file operations with REACT.
- Building a simple dynamic website with REACT
- Event Handling In React

Module 4: Introduction to Node.js and MongoDB

- Introduction to Node.js
- Installing and Exploring Node.js
- Intro Node.js Module System
- Importing Node.js Core Modules
- Importing npm modules and your own files
- Global npm modules and nodemon
- Connecting Node Express to MongoDb Creating GET, POST, PUT, Delete endpoints
- MongoDB vs SQL Databases
- Databases, Collections & Documents
- Comparing JSON & BSON
- Finding, Inserting, Deleting & Updating Elements

Module 5: Introduction ChatGPT and GitHub

- Introduction to ChatGPT
- Overview of ChatGPT 4 and Natural Language Processing
- Understanding Version Control and Git Basics
- Setting Up a GitHub Repository
- Collaborative Development Workflows
- Pull Requests, Branching, and Code Reviews
- Applying Knowledge to Comprehensive Projects
- Showcasing Projects and Demonstrating Functionality
- Feedback, Evaluation, and Certification

Module 6: Continuous Learning and Certifications

- Staying Updated with REACT
- Contributing to GitHub Repositories and Open Source
- Certificate Distribution

Note: This Program outline is designed for a 2.5-months duration and may be adjusted based on the pace of learning and specific needs of the participants. Practical exercises, hands-on projects, and guest lectures from industry experts can be incorporated to enhance the learning experience.

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