Guide2Code - PHP Programming Roadmap

🔷 Phase 1: Beginner Level

📌 Topics to Learn:

1. Introduction to PHP (Setup, Syntax, Echo & Print)
2. Variables & Data Types (Strings, Integers, Arrays, Booleans)
3. Operators (Arithmetic, Comparison, Logical, Assignment)
4. Control Structures (if-else, switch-case, ternary operator)
5. Loops (for, while, do-while, foreach)
6. Functions (User-defined, Built-in Functions, Parameters, Return Values)
7. Arrays (Indexed, Associative, Multidimensional, Array Functions)
8. Forms & User Input (Handling $_POST and $_GET)
9. File Handling (Reading, Writing, Appending Files)
10. Basic Debugging (Error Reporting, var_dump(), print_r())

🚀 Beginner Project Ideas:

- 📟 **Simple Calculator** – Perform basic arithmetic operations
- 📊 **Student Grade Calculator** – Input marks and display grades
- 🔢 **Number Guessing Game** – User guesses a number, program gives hints
- 🌡 **Temperature Converter** – Convert Celsius ↔ Fahrenheit
- 📅 **Age Calculator** – Calculate age based on birth year
- 📄 **Basic Contact Form** – Accept user inputs and display messages

🔷 Phase 2: Intermediate Level

📌 Topics to Learn:

1. Object-Oriented Programming (Classes, Objects, Inheritance, Polymorphism)
2. Working with Databases (MySQL, PDO, CRUD Operations)
3. Sessions & Cookies (User Authentication, Login Systems)
4. File Upload & Handling (Images, Documents)
5. Form Validation & Security (XSS, SQL Injection, Sanitization)

6. Sending Emails with PHP (PHPMailer, mail())
7. Working with APIs (cURL, JSON, REST API Integration)
8. AJAX with PHP (Asynchronous Data Handling)
9. Introduction to MVC Architecture (Basic Frameworks)
10. Error Handling & Logging (Try-Catch, Custom Errors)

🚀 **Intermediate Project Ideas:**

- 📚 **Library Management System** – Manage book records with MySQL
- 📞 **Contact Management System** – Add, edit, delete contacts
- 📝 **To-Do List App** – Store tasks using a database
- 🏦 **Banking System** – Deposit, withdrawal, balance tracking
- 🛒 **Simple E-commerce Cart** – Store items using sessions
- 🌦 **Weather App** – Fetch weather data using APIs

🔷 **Phase 3: Advanced Level**

📌 **Topics to Learn:**

1. PHP Frameworks (Laravel, CodeIgniter, Symfony)
2. Authentication & Authorization (JWT, OAuth, Social Logins)
3. RESTful API Development (Building APIs with Laravel)
4. Advanced Database Management (Joins, Indexing, Optimization)
5. Payment Gateway Integration (PayPal, Stripe)
6. Security Best Practices (Encryption, Hashing, CSRF Protection)
7. WebSockets & Real-time Communication (PHP Ratchet)
8. Cloud Deployment (VPS, Docker, AWS, DigitalOcean)
9. Microservices & API Gateway (GraphQL, API Rate Limiting)
10. CI/CD & Testing (PHPUnit, Jenkins, Automation)

🚀 **Advanced Project Ideas:**

- 💬 **Real-time Chat Application** – Using WebSockets & PHP
- 🏪 **Full E-commerce Website** – Laravel with payment integration
- 📊 **Stock Market Dashboard** – Fetch and analyze stock data

- 🔒 **Secure Login System** – JWT, OAuth authentication with PHP
- 🏠 **Property Listing Website** – Dynamic database-driven property listings
- 🎥 **Video Streaming Website** – Upload, stream, and manage videos