

Backend Development Tasks & Instructions — CodeAlpha

Backend Development — Internship Overview

This internship program provides real-world experience in **backend development and server-side programming**. CodeAlpha is a leading software development company focused on innovation, scalability and robust architecture. The internship empowers students to build efficient APIs, manage databases and work with backend frameworks using modern tools like Node.js, Django or Express. Interns will receive hands-on training, expert guidance and opportunities to work on live backend systems in a collaborative environment.

Internship Perks

- Internship Offer Letter
 - Completion Certificate (QR Verified)
 - Unique ID Certificate
 - Letter of Recommendation (based on performance)
 - Job Opportunities / Placement Support
 - Resume Building Support
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Instructions for Interns

1. Share your internship status on **LinkedIn**, tagging **@CodeAlpha**.
 2. Complete the **assigned projects** within the mentioned time frame.
 3. Upload your complete source code to **GitHub** in a repository named:
`CodeAlpha_ProjectName`
 4. Post a **video explanation** of your project on LinkedIn with GitHub repo link.
 5. Submit your completed task using the **Submission Form**.
 6. **Complete any 3 or 2 out of the 4 tasks** listed below (from your domain).
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Backend Development Task List

(Complete any 2 or 3 of the following tasks)

TASK 1: Simple URL Shortener

- **Create a backend server** using Flask (Python) or Express.js (Node.js).
 - **Build an API endpoint** to accept long URLs and generate a unique short code.
 - **Store the mapping** of short code and original URL in a database (like SQLite, MongoDB, etc.).
 - **Set up a redirect route** where accessing the short URL takes the user to the original long URL.
 - **Optional:** Add a basic frontend to input long URLs and show the shortened version.
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✓ TASK 2: Event Registration System

- **Set up backend** using Django or Express.js to manage routes and logic.
 - **Create models** for events and user registrations in your database (like PostgreSQL, MongoDB etc.).
 - **Build API endpoints** to view event list, event details, and submit registration forms.
 - **Link registrations** to users and events, and allow users to manage (view/cancel) their registrations.
 - **Optional:** Add admin panel or authentication for event organizers.
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✓ TASK 3: Restaurant Management System

- **Set up backend** using Django or Express.js to handle restaurant operations (orders, tables, inventory).
 - **Design database models** for menu items, orders, tables, reservations, and inventory.
 - **Create APIs** for placing orders, reserving tables, updating inventory, and viewing menu.
 - **Implement logic** for order processing, table availability check, and inventory auto-update.
 - **Optional:** Add reporting features (e.g., daily sales, stock alerts) and admin access panel.
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✓ TASK 4: Job Board Platform

- Set up backend using Django or Express.js to handle job listings, employers, candidates and applications.
 - Design database models for employers, job listings, candidates, resumes, and job applications.
 - Build API endpoints for posting jobs, searching jobs, uploading resumes, applying for jobs, and tracking applications.
 - Implement logic for job search filters, resume uploads, application status updates, and employer notifications.
 - **Optional:** Add admin panel and reporting features like application statistics and user management.
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Important Note

Internship Completion Criteria:

To be eligible for the internship certificate, participants must complete a minimum of **two or three tasks**. Submitting only one task will be considered **incomplete** and certificates will **not** be issued in such cases.



Submission Details

A submission form will be shared in your respective **WhatsApp group**. You are required to submit your completed task only through that form. Please follow the instructions mentioned in the form carefully to ensure your submission is accepted.



Contact Information

- Website: www.codealpha.tech
- WhatsApp: [+91 8052293611](https://wa.me/918052293611)
- Email: services@codealpha.tech