Relevel

Backend Development
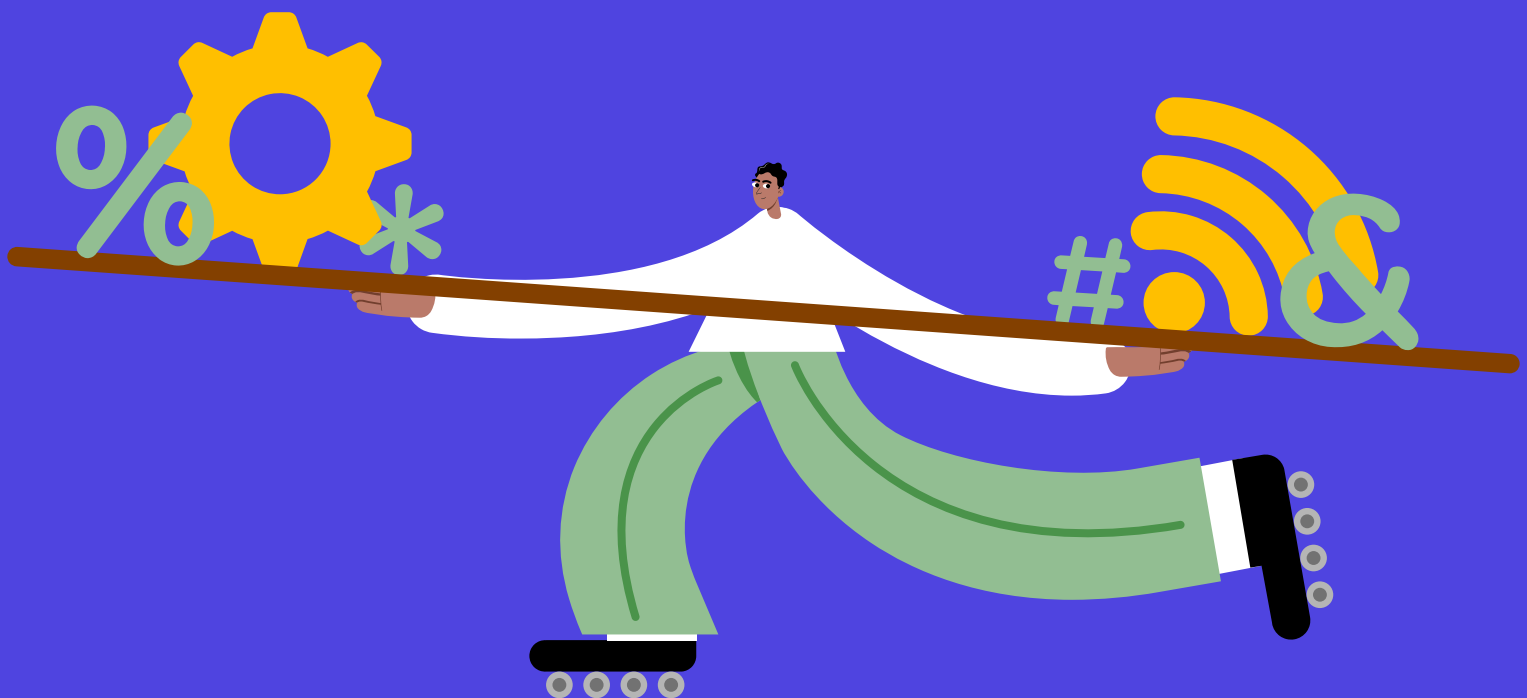
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About Relevel

The coming decade is one of immense **opportunity for India** with a majority of our population under the age of 35 and the growing proliferation of global technology.

For a long time, India was known as the land of outsourced opportunities. The past decade however has shown that **Indians can build global products and businesses**. This is expected to grow manifold in the coming years provided we solve for one crucial element - **skilled talent.**

Today, there is a massive divide between aspirants looking for the **right opportunities** on one side, and companies vying for the best talent on the other. Historically exposure to opportunities has been defined by one's college, degree, or who they already knew in the industry. The events over the last year have only made the situation worse.

We believe it is high time that this changes for good! We believe that hiring should depend only on your capabilities and skills, not your college degree.

Being India's **Largest Learning Platform**, democratizing knowledge and access is a core tenet of the **Unacademy Group**. We are now extending that to opportunities through Relevel by leveling the playing field for millions of Indians. We imagine a future where candidates have a transparent path to the **career of their dreams.**

At Relevel, we believe **your history doesn't matter. Your skills do.** Your network doesn't matter. You do!

All the best. We know you can crack it!

Why become a Backend Developer?

Every business is moving online today in order to reach more customers.

From using Swiggy to order food, Flipkart for almost everything else and Paytm to transact for all of this, technology has become an integral part of our daily lives across the last decade.

Developers are the heroes who spearheaded this. And we don't see that changing in the future!

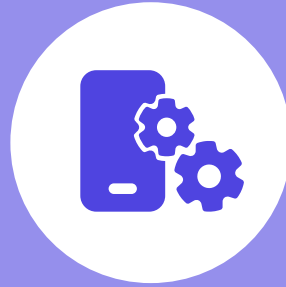Backend Developers ensure that a product is working as intended. They define the functioning of the product.

If solving problems logically and building scalable systems excites you, a career in Backend Development might just be what you're looking for! With Relevel Courses, you can now explore exactly what that will look like.

Why Relevel Courses?

340+ hours of Live Learning

3 End to End Web Apps

Learn from the best in the industry

Placement Mentoring

Periodic tests with Projected Relevel test scores

Merit-based scholarships

Learn:
The Relevel Way

Doubt Solving Sessions
Weekly educator-led doubt solving sessions along with Teaching Assistant-led doubt solving sessions 4 - 5 times a week ensure that your understanding is crystal clear.

Quizzes & Assignments
Real learning happens only when we practice. Specially curated quizzes after each session for a life-long learning experience.

Periodic Proctored Tests
Track how far you have come along in your endeavour to learn through these fortnightly tests.

Dedicated Success Managers
To help you reach that finish line, and anything that comes enroute this journey.
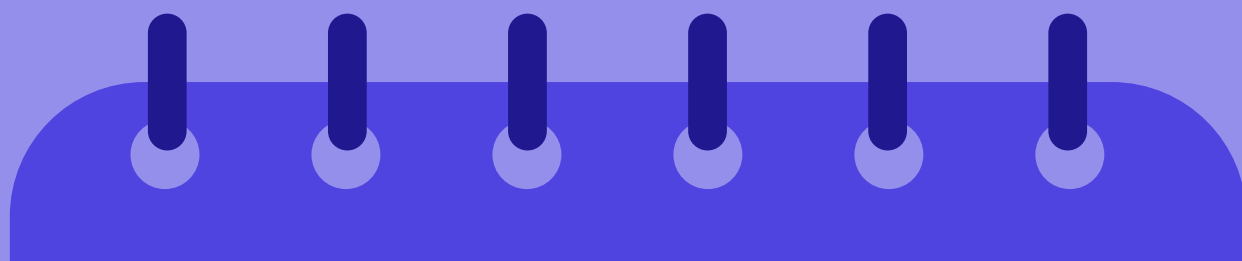
Community Access
Learning by sharing. Connect with your peers and achieve your goals together.

Is this for You?

If you're looking to start your career as a Backend Developer, or just pick up the necessary skills, you have come to the right place!

Weekly Class Schedule

MON	TUE	WED	THU	FRI	SAT	SUN
7 PM - 8 PM Doubt Clearing Session by Teaching Assistant	**Off day for practice**	**7 PM - 8 PM** Doubt Clearing Session by Teaching Assistant	**Off day for practice**	**7 PM - 8 PM** Doubt Clearing Session by Teaching Assistant	**11 AM - 2 PM*** Session by Educator	**Guest Lecture/ Event/Doubt Session with educators/ Test**
8 PM - 11 PM Session by Educator		**8 PM - 11 PM** Session by Educator		**8 PM - 11 PM** Session by Educator	**7 PM - 8 PM** Doubt Clearing Session by Teaching Assistant	

*Weekend session timings may change depending on the availability of the educator.

Classes by Experts

Animesh Gaitonde
Senior Software Engineer,
Microsoft

Arnab Chakrabarty
Director and HOD Learning and
Development, TOTSOL Technologies

Sanjeet Boora
SDE 1, Microsoft

Sanket Singh
Software Engineer II, Google

Vishwa Mohan
Staff Software Engineer, LinkedIn

Anjali Sheel
Software Engineer II,
Microsoft

Learn from Industry Leaders

Shubham Nayyar
Head Of Technology, OYO Vacation Homes

Nitish Jha
Head of Engineering, Gojek

Gaurav Lahoti
VP Engineering, Khatabook

Curriculum Snippet

Module 1

Programming Fundamentals   6 weeks

1 **Basic Programming Constructs**
Algorithms and Flowchart, Conditional statements, Loopings, Comments
Programming Fundamentals

2 **JavaSript Fundamentals**
JS Types, Coercion, Functions

3 **Basics Of Functional Programming**
Higher Order Functions, Scopes and Closures, Hoisting, Call Backs & Promises

4 **Arrays and Objects**
Introduction to arrays and objects, Object and array properties, How Object works
in JS, JSON

5 **Recursion**
Introduction to recursion, Problem solving on recursion, Call stack and Memory
map for recursion, Backtracking

6 **Time and Space Complexity Analysis**
Experimental Analysis vs Amortized Analysis, Time and space analysis,
Recurrence relations and recursive complexities, Master theorem

7 **Sorting Algorithms**
Selection Sort, Bubble Sort, Insertion Sort, Merge Sort, Quick Sort

8 **Searching Algorithms**
Linear Search, Binary Search and Monotonic Search Space, Binary Search On Answer
Ternary Search, Problem-solving

Module 2

Building an E-commerce Website   5 weeks

1 **Intro to NodeJS and NPM**

Basics of NodeJS, Module System of NodeJS, Process and Globals,
Package Management with NPM

2 **Server-Side Programming with Node and Express**

Setup of Express, Basic Server setup, Middlewares in Express

3 **MVC Architecture**

Basics Of MVC, Setting up Controller, Routes and Models for the API,
Different route handling in Express

4 **Authentication Security and JWT**

Basics of Authentication, JWT Tokens, Components of Authentication: Signup
and Login, Encrypting Passwords

5 **Database Setup and Integration**

Setup of MySQL, Integrating MySQL with ExpressJS, Introduction to ORM
Integrating Database to your Application, Implementation of Cart and DB tables setup

6 **Sorting, Pagination and filtering**

Implementing Filters in the Ecommerce Application, Using SQL for pagination and sorting

7 **Testing functionalities**

Different types of tests, Setting up testing framework JEST, Writing Unit Tests for
multiple components of the Application

8 **Deploying the app**

Setting up the project on Github, Hosting applications on Heroku, Checking logs
on Heroku and Heroku CLI

Module 3

Data Structures and Algorithms   5 weeks

1 Linked List

What problems Linked List Solve, Types Of Linked List, Implementation of Linked List, Problems On Linked List

2 Stacks

Applications of Stack in Industry, Implementation of Stacks, Basic Problems on Stacks, Monotonic Stacks

3 Queue

Applications of Queue in Industry, Implementation of Queue, Basic Problems On Queue, Monotonic Queue, Deque

4 Binary Trees

Binary tree and BST, Properties and applications of trees, Tree traversal, LCA (Lowest Common Ancestor) of Binary Tree

5 Hashing

Basics of Hashing, Load factor and Rehashing, Application of Hashing, Collision theory Implementation of Hashtable, Problem Solving on Hashing

6 String Algorithms

String Hashing, Rabin Karp Algorithm, KMP and Z algorithm, Tries and Problem Solving

7 Priority Queue And Heaps

Implementation of Priority queue using heaps, Order Statistics Using Heaps, Problem Solving on heaps

8 AVL Trees

Balanced Binary trees, AVL Trees operations, Tree balancing operations for AVL trees

Module 4

Building a CRM Application   5 weeks

1 **Architectures, Requirement Gathering and Choosing Tech-Stack**
Learn about the most popular types of architecture. Understand the business requirements for the CRM app and make appropriate choices pertaining to the tech stack for building this application

2 **Intro to MongoDB and Mongoose**
Learn about the popular NoSQL database - MongoDB and modeling using Mongoose

3 **Building the CRM App: Registration, Login, Actor Activities**
Start building the CRM app by creating the endpoints for registration, login and activities of different types of actors in the system

4 **Scaling, Testing and Deploying the CRM App**
Learn about caching (system design) and implement it on your CRM app. Add Unit Tests and Deploy it using Heroku

Module 5

Building a Movie Booking Application   4 weeks

1 **App Requirement Gathering, HLD, LLD, Tech Stack Choices**
Understand the business requirements for the movie booking app, design the high level and low level for it and make appropriate choices for the tech stack

2 **Data Modeling**
Decide on a database schema, and implement it in your database

3 **Building the API endpoints**
Build the API endpoints for the app

Module 5 (contd.)

Building a Movie Booking Application

4 weeks

4 **System Design and Scaling the App**
Learn to scale the app by applying concepts of system design

5 **Unit Testing and Deploying the App**
Unit Test the app and deploy it to Heroku

Module 6

Problem Solving Sessions

4 weeks

Problem Solving Sessions on JavaScript concepts, DSA, and feature building.

Capstone Projects

Use your learnings to solve real business problems faced by some major companies.

E-Commerce Application

Build a scalable online marketplace for sellers to upload new products and where users can buy anything from electronics to clothing.

amazon

Sales CRM

Build a unified sales CRM to enable lead tracking, and manage your customers better.

ZOHO CRM

Movie Booking App

Build a website on which users can book a movie, a match, or any event of their choice at a location and price suitable for them.

bookmyshow

Placement and Career Support

With Relevel, you can now get a job in three simple steps

- Qualify the Relevel Backend Development Test
- Interview with a minimum of 5 companies
- **15 DAYS** Receive an offer within 15 days!

Paytm · yatra · CRED · meesho · tm · shaadi.com · upGrad · Groww · GRAPHY

Course Details

⏳	**Duration of the Course**	**7 months**
🤝	**Commitment Required**	**15 hours in a week**
₹	**Course Fee**	**INR 60,000/-**

What are you waiting for?

Enroll Now