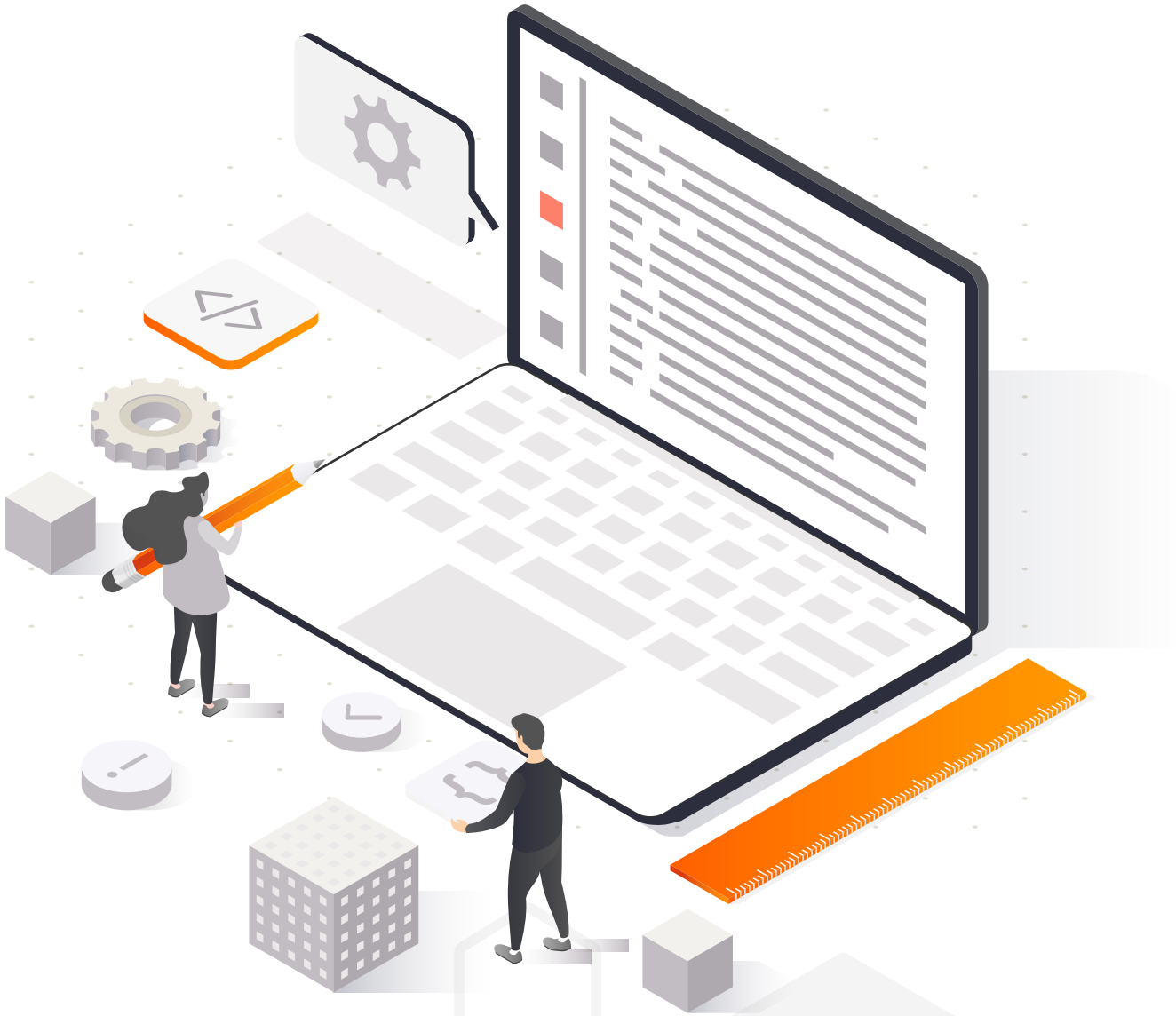
CODING NINJAS



Operating System

"To a programmer, an operating system is defined by its API."

~Charles Petzold

About Coding Ninjas

At Coding Ninjas, our mission is to continuously innovate the best ways to train the next generation of developers and transform how tech education is delivered. Training is designed and provided by professional developers turned educators who have experience working at bigwigs like Facebook, Amazon, Google etc. and are Stanford, IIT, IIIT alumni.

Coding Ninjas teaches 17+ Programming courses in Foundation, Advanced, Data & Development courses such as Machine Learning, Data Science, Web Development, Android and more.

Doubt Support

We have developed a very scalable solution using which we are able to solve 4000+ doubts every single day with the help of 500+ doubts on the platform itself with an average rating of 4.8 out of 5.

Placement Cell

50,000+
Students taught so far

78%+
Percentage placement

2500+
Students placed in top MNCs

300+ Placement Partners | **7.6L** Average Salary
Number of placement partners and average salary of students

100+
Students received International job offers

Ankush Singla

Co-Founder & Instructor

Ankush holds a Bachelor's degree in Computer Science from India's most premier institute- IIT Delhi and a Master's degree in Computer Science from Stanford University.

He is a coding enthusiast and has worked with bigwigs like Amazon and Facebook in the past.

Live Mentor Support & Student Experience Team

Dedicated TAs and Student experience team to make sure that your doubts get resolved quickly and you don't miss your deadlines.

Want A Break? Pause Your Course

Take a short break when you need it. Pause your course for upto 60 days. Resume when you are ready

Get An Industry Recognised Certificate

Get awarded with an industry recognised certificate after you complete your programming course

Be A Part Of The Learning Community

Slack groups to meet your batchmates. Learn from your peers about resources, doubts and more!

Programme Overview

Course Overview

This course will help you prepare for the questions asked on Operating systems in software engineering interviews, with the unique perspective to view operating systems in three parts: Virtualization, Concurrency and Persistence. This course also includes, demonstrations to aid learning and to map theoretical concepts to Linux OS..

Features

150+
Questions

12+
hours of video content

DURATION: 2 MONTHS

WHY
Operating System

- Understand the relevance of OS in computer system and the components of OS such as Process, Memory, Threads and Disk
- Prepares you for interviews of companies such as AWS, CommVault, Adobe, which rely heavily on Operating Systems
- This course will make you a power user of Linux OS
- Understanding Linux makes stand out, as 23 out of top 25 companies in the world run on Linux and 96.3% of the world's top 1 million servers run on Linux

Companies Hiring

aws amazon Adobe

Course Outcome

Student will be able to learn the following:

- Components of OS such as Process, Memory, Threads and Disk
- Process Scheduling Algorithms
- Process Synchronization Issues and their Solutions
- Mapping of OS concepts with Linux OS
- Troubleshooting and Debugging of Issues in Linux OS

Placement after the course

Sanchit Arora

Google

Priyansh Gupta

amazon

Rohan Sahni

J.P.Morgan

Shivam Vishwakarma

zwayam

Shivam Ravikumar Sharma

TCS TATA CONSULTANCY SERVICES

Lavina Mulani

phenom people

Detailed Course Contents:

Introduction to Operating System

Introduction to OS	Detailed Definition of OS
	Components of OS: User Space and Kernel Space
	Demonstration on functionalities of Kernel
	Types of Kernel
	Introduction to terminal in Linux OS
	System Calls
Process Management	Process and Process Control block
	Architecture of Process with Basics of Storage Devices
	Process States
	Operations on Processes
	Special types of Process: Orphan and Zombie Process
	Process Scheduling
	Process Scheduling Algorithms: FCFS, Shortest Job First, Priority Scheduling, Round Robin, Multilevel Queue and Multilevel Feedback Queue Scheduling
Memory Management	Memory Management in Early Systems
	Improvement and Challenge of Isolation and Protection
	Understanding Stack and Heap Memory
	Initial attempts on Virtualisation of Memory and Address Translation
	Free Space Management
	Memory Allocation Techniques: Fixed Partitioning

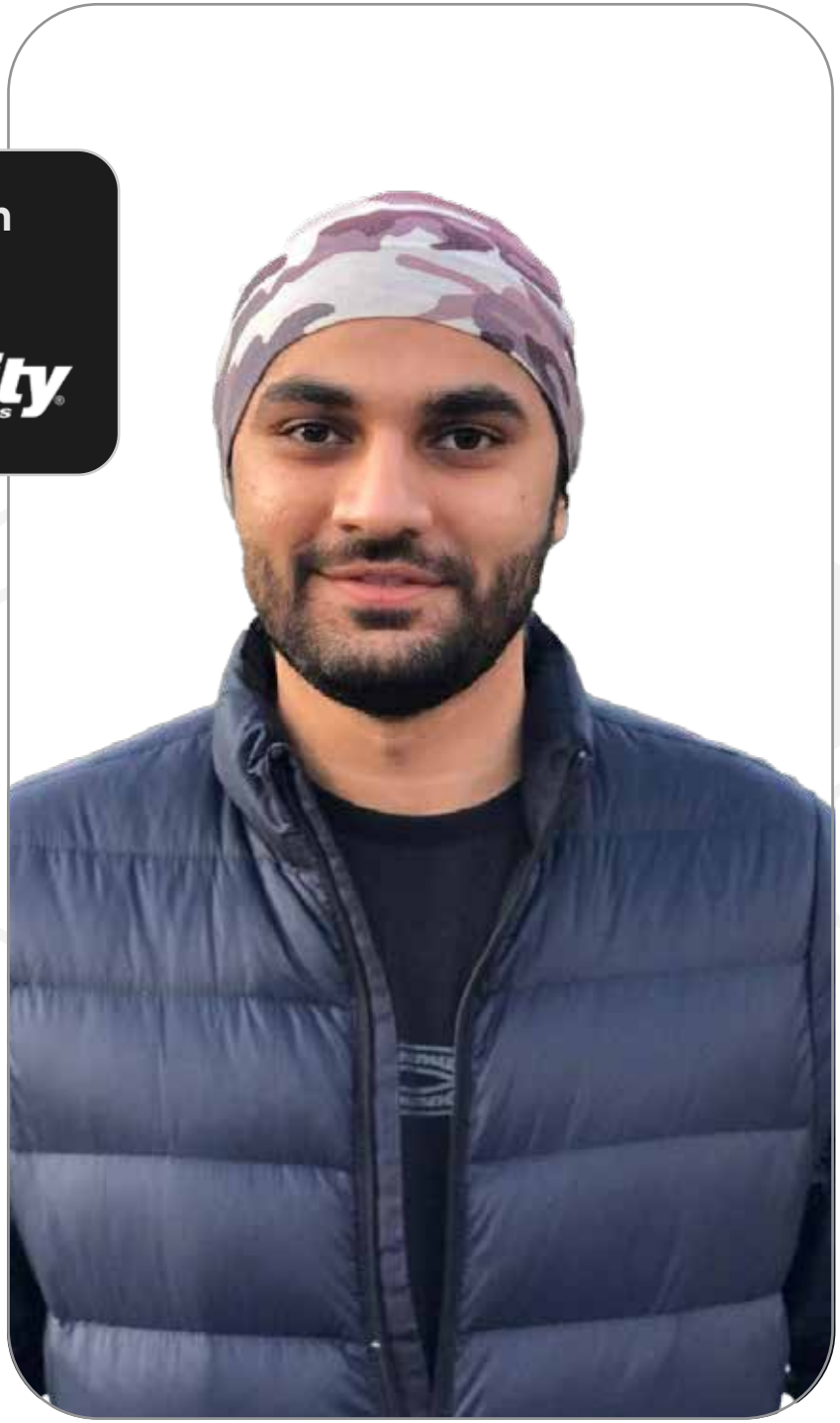
	Dynamic Partitioning, Segmentation, Paging, Paging with Translation Lookaside Buffer
	Virtual Memory and Page Faults
	Page Replacement Algorithms
	Processes, Threads and Multithreading
	Thread Scheduling Issues
	Solution to Synchronisations Issues: Locks, Conditional Variables and Semaphores
Concurrency	Processes, Threads and Multithreading
	Thread Scheduling Issues
	Solution to Synchronisations Issues: Locks, Conditional Variables and Semaphores
	Concurrency Bug: Deadlock
	Deadlock Avoidance and Prevention
	Banker's Algorithm
Storage Management	Need for Secondary Memory
	HDD and SSD
	File System, Files and Directories
	Disk Space Allocation Methods: Contiguous, Linked and Indexed
	Disk Scheduling Algorithms: FCFS, SSTF, SCAN, C-SCAN, LOOK, C-LOOK
Case Study: Linux OS	Introduction to Linux OS
	Process Management, Memory Management and File System in Linux
	Linux Cgroups and Namespaces
	Linux Boot Process
	User Management
	Package and Repository Management
	Jobs and Crontab
	Troubleshooting in Linux
	Debuggability using Logs

CODING NINJAS

Tanveer Singh

Placed at

Fidelity INVESTMENTS



1800-123-3598

contact@codingninjas.com

codingninjas.com

Follow us on