



## COMPUTER & INTERNET BASICS

- Basics of computers
- How binary works behind
- Computer languages high & low level
- Basic of oops, variables, and loops
- Tcp/ip, udp, http,(browser, server, dns
- How to setup environment in ide

## USER INTERFACE & FRONTEND DEVELOPMENT

- HTML & CSS
- Javascript & Dom
- Web development framework - React.js
- Introduction to React.js and JSX.

## MIDDLEWARE DEVELOPMENT

- Controllers, Providers, Modules, Middleware
- Exception and Error Handling
- Pipes, Guards, Interceptors
- What is TypeScript & TypeScript SDK Installation and setup
- OOPs Concepts
- Class, Object, Method, Modifiers, Access Modifiers, Constructor
- Abstraction, Interface, Inheritance, Polymorphism
- Method Overloading, Method Overriding
- Encapsulation
- Variables, Data Types & Operators in TypeScript
- Control Statements, Conditional Statements,
- Iteration Statements & Jump Statements
- Arrays & ArrayList in TypeScript
- Introduction to Node.js, Next.js & Nest.js

### Nest.js

- Build a REST API
- Write GET, POST, DELETE, UPDATE Methods
- CRUD Operation with JPA Repository

### Complete Application with Nest.js from the Scratch

- Reconcile User Profile and Employee Profile
- Role-Based Authorization
- Deploy Next.js With MySQL Database
- User Registration Page
- JWT(JSON Web Token)

### Deployment and containers

- Introduction to Docker and Kubernetes
- Deploying application to AWS
- Introduction to Keycloak User management

## BACKEND DEVELOPMENT

- Sql and relational database management systems mysql & maria db intro
- Introduction to Nosql databases mongo db, dynamo db & document db

## SOFTWARE TESTING

- What is testing
- How to write JUnit testcase

## CLOUD

- Introduction to AWS
- Deploying spring boot, Nodejs web application on amazon ec2 on AWS
- Working with S3 bucket

## AGILE BASICS

- JIRA burn hours
- Burn down chart
- Retrospection
- Demo Session
- JIRA, Scrum
- Kanban, Standup
- Xstream Programming, Sprint Planning

## REAL-TIME PROJECT

- SCRUM team Formed for a group of 10
- A Business use case problem / Client App with proper documentation is provided
- Project overview and technology walkthrough with help of a mentor
- A JIRA tool will be provided to run a sprint, backlog, grooming and demo
- Technical help on need basis will be provided for those who are needy

## FREE ENVIRONMENT TOOLS

- EC2, S3 BUCKET, ASES, A PROFESSIONAL EMAIL, JIRA ACCESS FOR AGILE, BUGS AND PROJECT MANAGEMENTB, SCRUM BOARD, AMAZON GATEWAY, EKS, AWS OPEN SEARCH, MYSQL, DOCUMENTDB, KEYCLOAK USERMANAGEMENT, MARIADB, DYNAMODB, AWS ACCOUNTS FOR EACH USER