ENTRI

Full Stack Web Development Syllabus

01 Preparation for Web Devs Journey

- Developer Fundamentals & Web Communication

02 Static Web Front End Design & Development

- HTML
- CSS
- Bootstrap
- Javascript Basics
- Javascript DOM,Events
- Hosting using Github pages
- Coding Competency: Hackerrank
- Project

03 Diving Deep - Front End Design

- Advanced concepts in responsive web design
- Intermediate Javascript – ES6, JS Async, await, Promise, Data Structures
- Object Oriented Programming
- Introduction to JSX
- Introduction to Front End Library – React
- React Fundamentals

04 Front End Development using React

- States & Hooks
- Learn React by Developing an E-commerce Application

05 Back End Development

Server Side Programming

- Introduction - HTTP verbs and usage
- Node Installation, npm, npx
- Node module system
- Server side programming using node
- Introduction to Framework - Express.js

Restful API creation using Express

- REST API's
- Developing RESTful API using Express
- CRUD operation using Arrays

Database Fundamentals

- Relational and Non- Relational Database
- Introduction to MongoDB
- Cloud Database setup and usage
- CRUD Operations

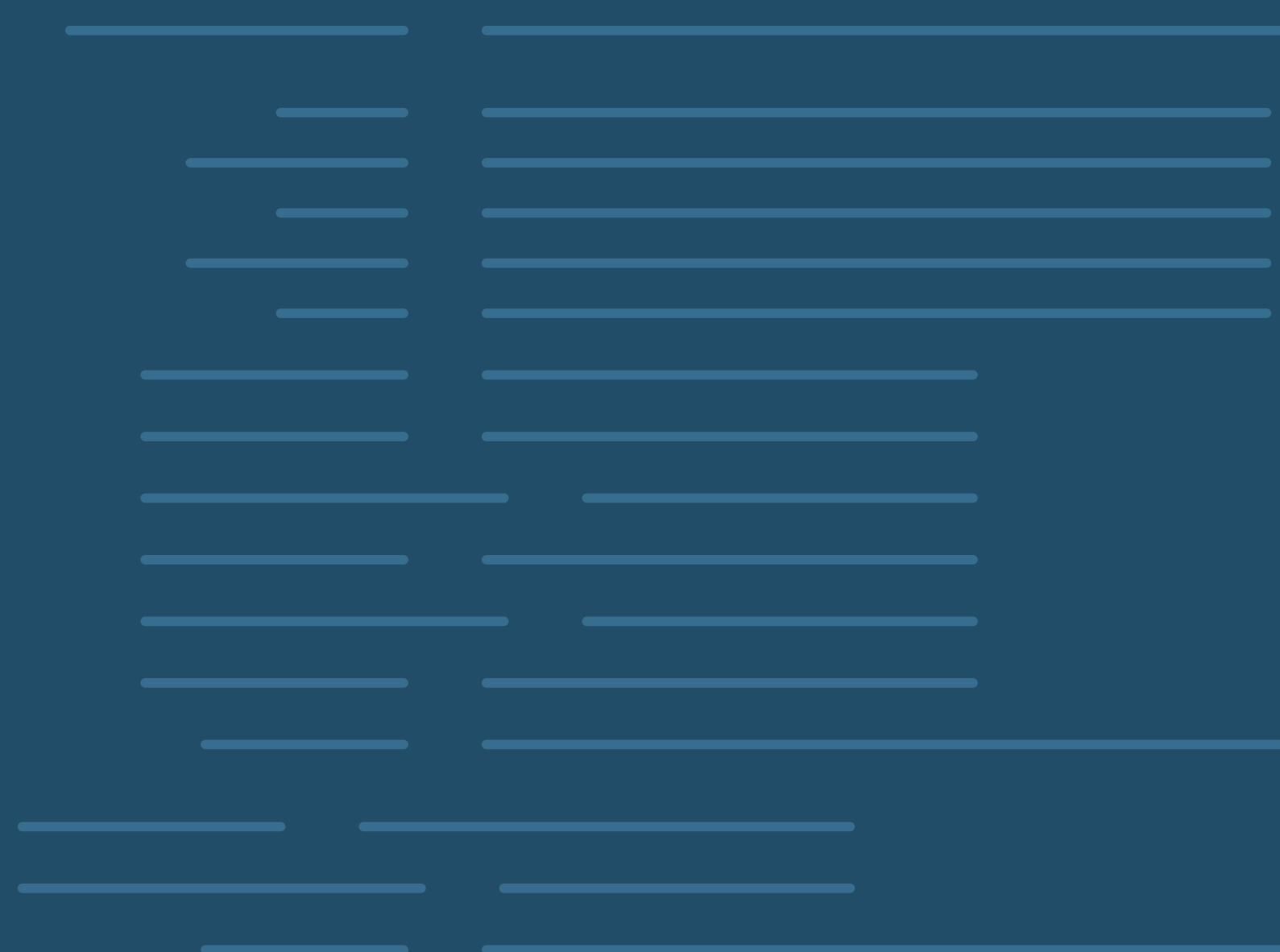**Database Integration with Node Express**

- Working with Mongoose model

Hosting with Heroku

Kick Start Fundamentals

Essentials of Operating Systems, Networks, Web Communication and use some essential developer tools like Command-Line and Git. You'll learn to version your software with Git and push your code to GitHub

Introduction to OS & Networks

- Overview of OS Concepts
- Networks & Internet
- Network Layer
- Application Layer
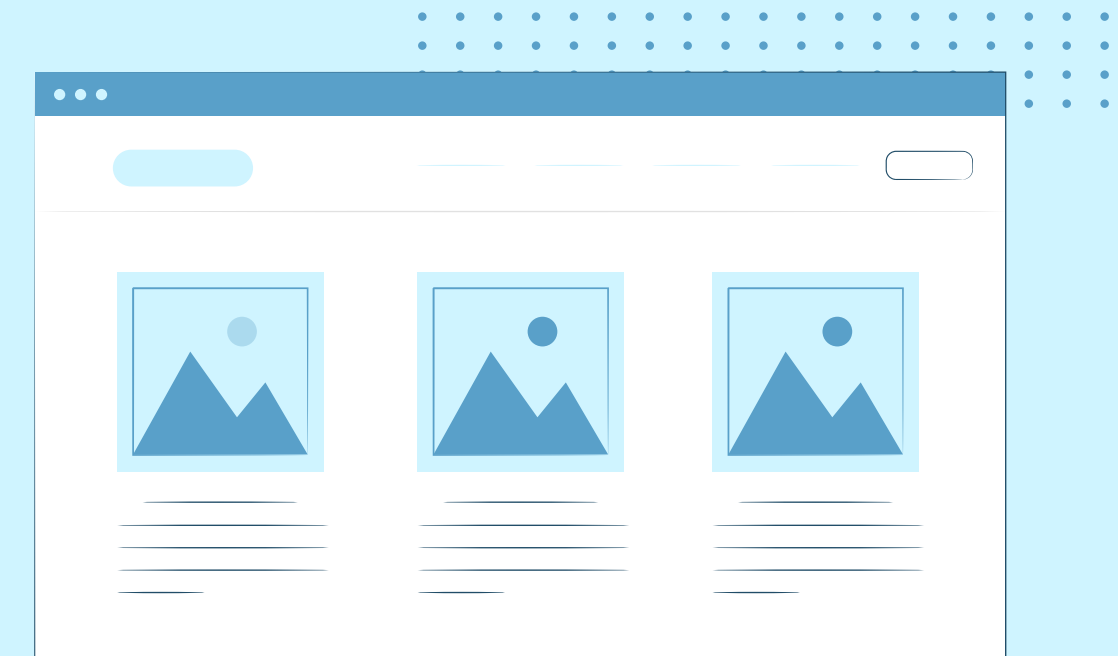- Web Servers

Working with Command Line

- Files & File System
- Managing System Packages
- Environment Variables
- Network & SSH

Collaborating with Git

- VCS & Git Repositories
- Staging Area & Commits
- Working with Branches
- Issues & Pull Requests

Static Website Design

This course helps you build a strong foundation in web technologies such as HTML, CSS. With this, you will create and publish simple and beautiful websites from scratch.

Software Development Fundamentals

- Importance of Frontend
- Fundamentals
  - > Syntax
  - > Debugging
  - > Tweaking Code

HTML Basics

- Getting Started
- HTML Elements
- HTML Headings
- HTML Paragraphs
- HTML Button
- HTML Attributes
- HTML Images
- HTML Hyperlinks
- HTML Containers
- HTML Lists
- HTML Forms

CSS Basics

- How to use CSS
- CSS Selectors
  - > Class Selector
  - > Id Selector
  - > Type Selector
  - > CSS Specificity
  - > CSS Inheritance
  - > CSS Cascading
- CSS Units
- CSS Box Model
- CSS Font style properties
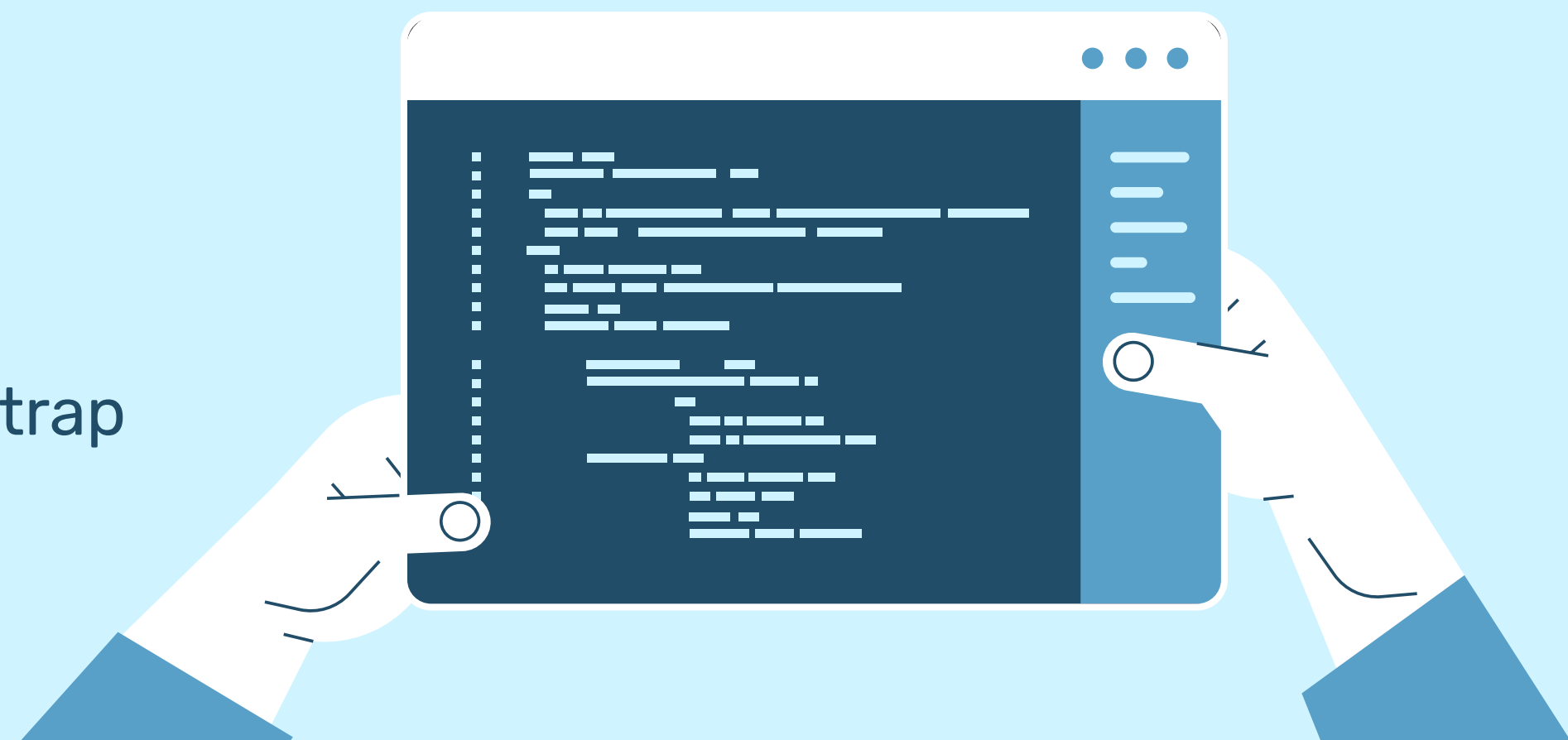 - > CSS Margins
  - > CSS Paddings

- > CSS Borders
- CSS Rulesets
- CSS Properties
- CSS Colors
- Background colour & Background Image
- CSS display classes
  - > Block
  - > Inline

Bootstrap Components

- An overview of Bootstrap
- How to download and use Typography, Buttons, Forms Carousel
  - > Bootstrap buttons
  - > Form
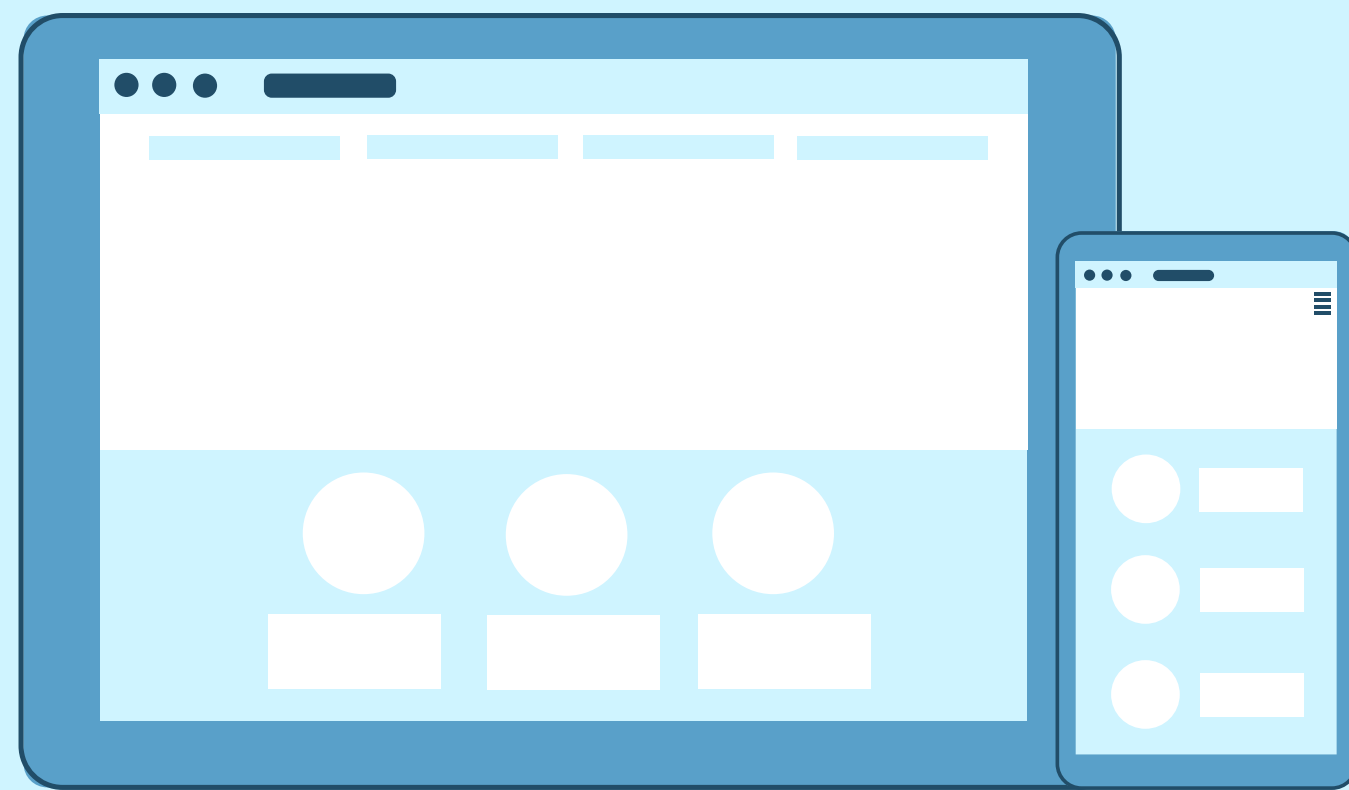 - > Colors
- Embedding Videos
- Cards

Course
Project

Build your Tourism Website
by using HTML5, CSS3 and Bootstrap

Responsive Website Design

This course helps you build a strong foundation on web technologies such as HTML, CSS, Media Queries, and Flexbox. With this, you can create a responsive web application that runs smoothly across all the devices like desktop, tablet, and mobile

Intermediate CSS

- Block vs inline elements
- Grid, Flex, etc...

CSS Media Queries

- Media Query
- Media Types
- Media Features
  - Width, min-width, max-width
  - Height, min-height, max-height
  - Orientation
- Combining Multiple Media Features in a single Media Query. Logical Operators (and)
  - Logical Operators (not)
  - Logical Operators (,)

Course Project

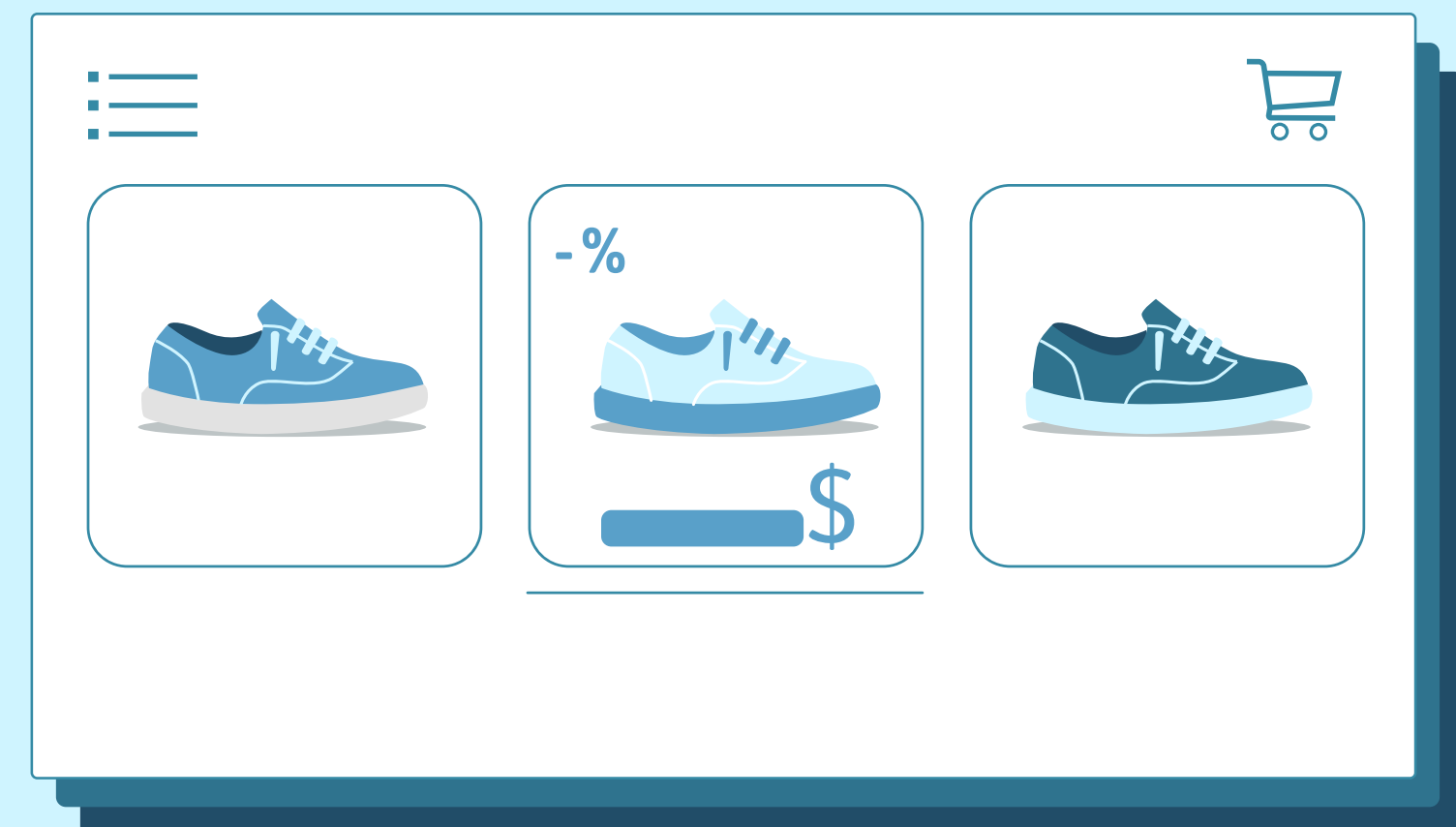Build a responsive Food Munch website using HTML5, CSS3 and Bootstrap Grid System.

Bootstrap

- Bootstrap Grid System
  - > Container
  - > Row
  - > Column
- Bootstrap Utilities
  - > Display Utilities
  - > Flex Utilities
  - > Sizing Utilities
  - > Spacing Utilities
- Navbar
- Buttons
- Colors

Course **Project**

Build a responsive Ecommerce website using HTML5, CSS3 and Bootstrap Grid System.

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Dynamic Web Applications

In this course, you will understand the fundamental concepts in JavaScript and apply them to build dynamic and interactive web projects. You will also learn scope, hoisting, and the fundamentals necessary to use modern frameworks like React, Angular, and Vue. You'll master key functional methods like map, reduce, and filter plus promises and ES6+ asynchronous JavaScript!
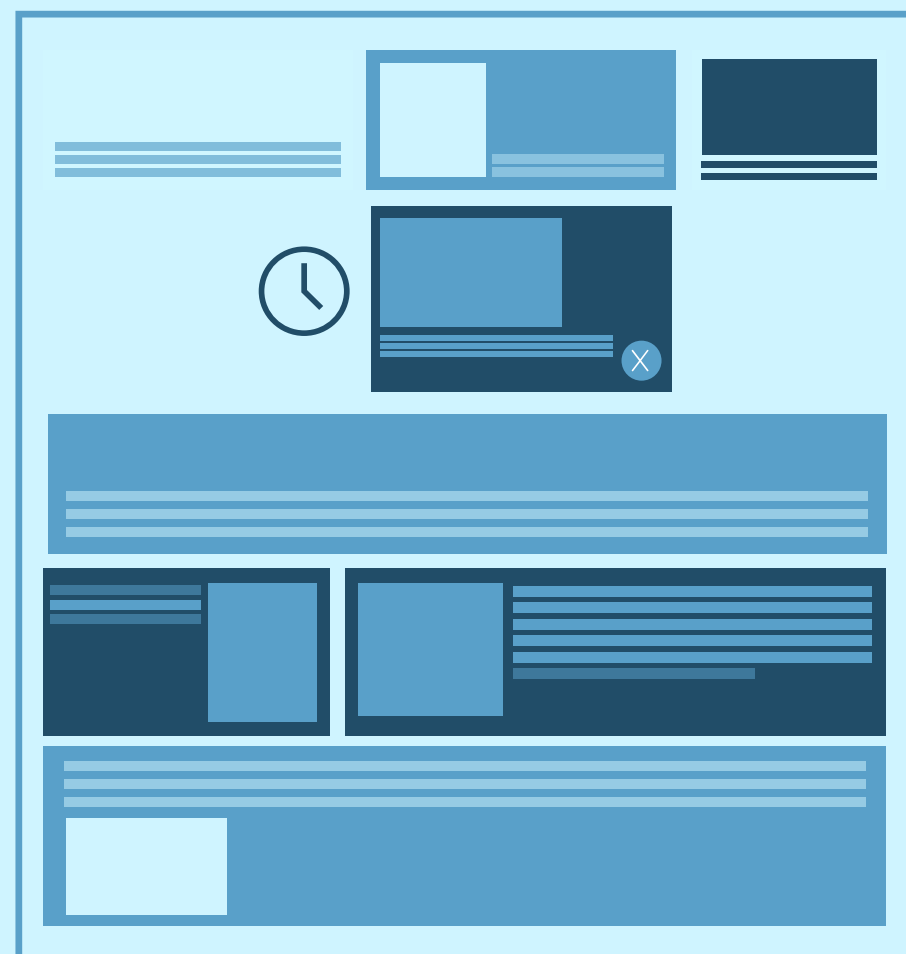
Introduction to JavaScript

- Data Types
- Variables
- Basic Operators
- Conditionals
- Loops
- Functions
- Arrays
- Objects
- Control Flow
- Comments
- Math Functions

DOM Manipulation

- The JavaScript Console
- Introduction to the DOM
- Defining the DOM
- Select and Manipulate
- Important Selector Methods
- Manipulating Style
- Manipulating Text and Content
- Manipulating Attributes
- Local Storage

Course **Project**

Build a Todos Application using HTML5, CSS3 and JS.

Forms

- The form element
- The label element
- The input element
- The option element
- The optgroup element
- The button element
- The select element
- The textarea element
- Form validations and Input validations

Array Methods

- Adding & Removing Elements
  - push
  - unshift
  - splice
  - pop
  - shift
- Finding Elements
  - find
  - indexOf
- Concat

Course **Project**

Build a Wikipedia Search Application using HTML5, CSS3, JS.

Forms

- How to add Event Listeners
- Callbacks
- Schedulers
  - > setTimeout
  - > clearTimeout
  - > setInterval
  - > clearInterval
- Hypertext Transfer Protocol (HTTP)
  - > HTTP Requests using Fetch
  - > HTTP Responses
  - > Working with JSON data

Intermediate JavaScript

In this course, you will learn the concepts like Events, Scope, Hosting, this, ES6 Classes, Error handling, More about Objects, and how to handle Asynchronous JavaScript.

Rest parameters and spread syntax

- Destructuring Arrays
- Destructuring Objects

More Objects

- Constructor Functions
- Factory Functions
- Constructor Method
- New Keyword

this

- this in methods
- window scope
- this in function declarations
- this in events

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Prototypes & ES6 Classes

- Built-in Constructor Functions
- Constructor Property
- Inheritance
- this in classes

Asynchronous JS

- Async/Await
- Promises

Scope & Hoisting in JavaScript
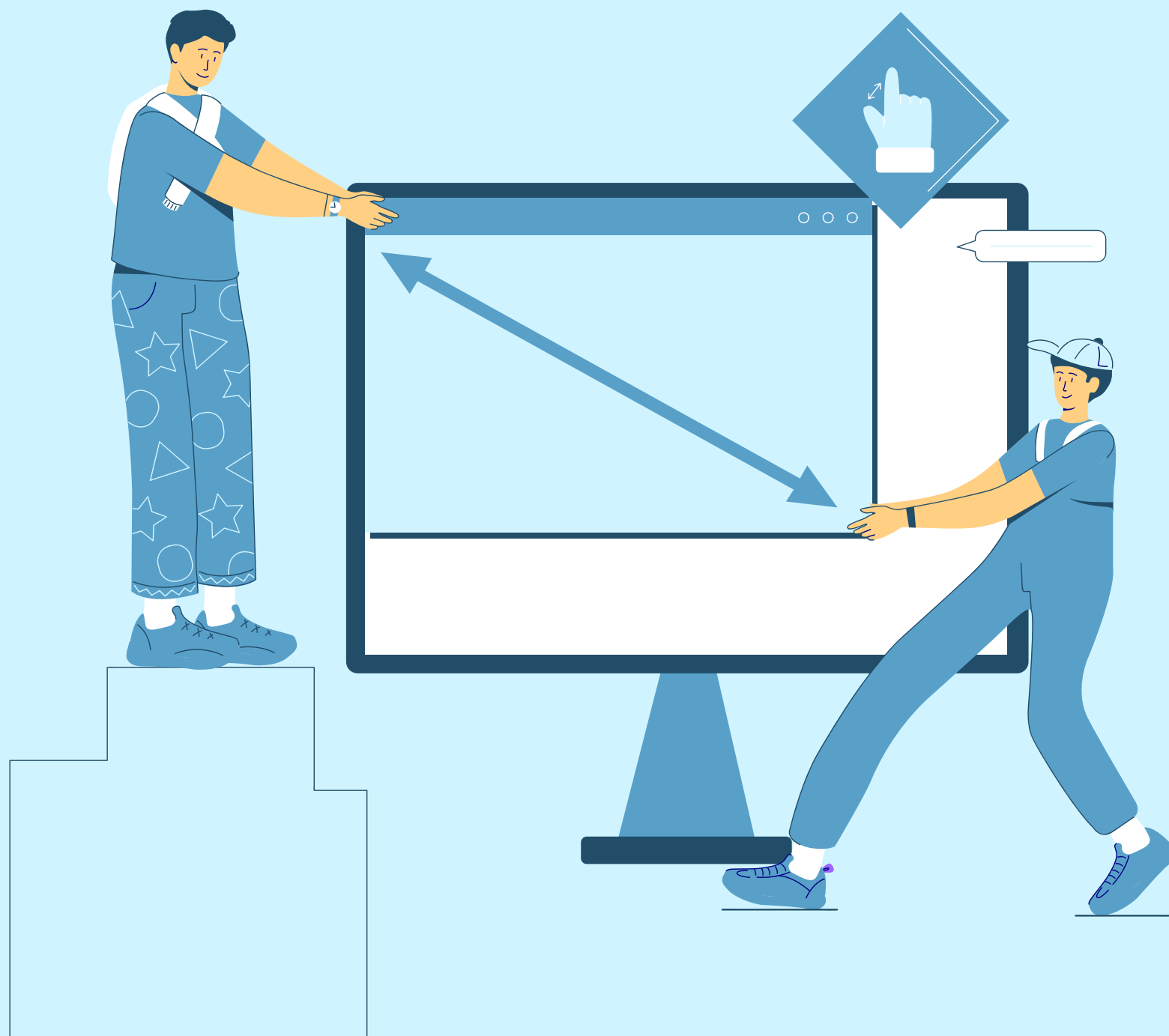
Array Methods

- map
- filter
- reduce

String Manipulations

- trim & split Methods
- toUpperCase & toLowerCase Methods
- includes Method

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Intermediate Responsive Web Design

This course will help you to develop a responsive layout using CSS Flexbox and CSS Media Queries.

CSS Layouting

- CSS Flexbox
  - display
  - flex-direction
  - justify-content
  - align-items
  - flex-wrap
  - flex- flow
  - align-content
  - align-self
  - flex-grow
  - flex-shrink
  - order
- Sizing Elements
- Over flow
- Box Sizing
  - Content Box
  - Border Box

React JS - Getting Started

In this course, you will learn how to build stateful web applications with the ReactJS library. When you finish this course, you will be comfortable creating an application in ReactJS, from scratch.

Introduction to React JS

- Why React?
- Stateful + Stateless components
- Hello World
- Introducing JSX
- Rendering Elements
- Components and Props
- State and Lifecycle
- Handling Events
- Conditional Rendering
- Lists and Keys
- Forms
- Composition vs Inheritance
- Thinking In React

CSS in JS

- Styled Components
- Emotion

Routing

- Query parameters
- Path parameters

Authentication and Authorization

Course Project

Build an Ecommerce application using React JS

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React JS Hooks

In this course, you will learn how to build stateful web applications with the React JS Hooks

Introduction to Hooks

- Introducing Hooks
- useState
- useEffect
- useContext
- Hooks with Local Storage
- Hooks with React Router
- Data fetching using Hooks
- Writing Custom Hooks

Course Project

Build an Ecommerce application using React JS Hooks.
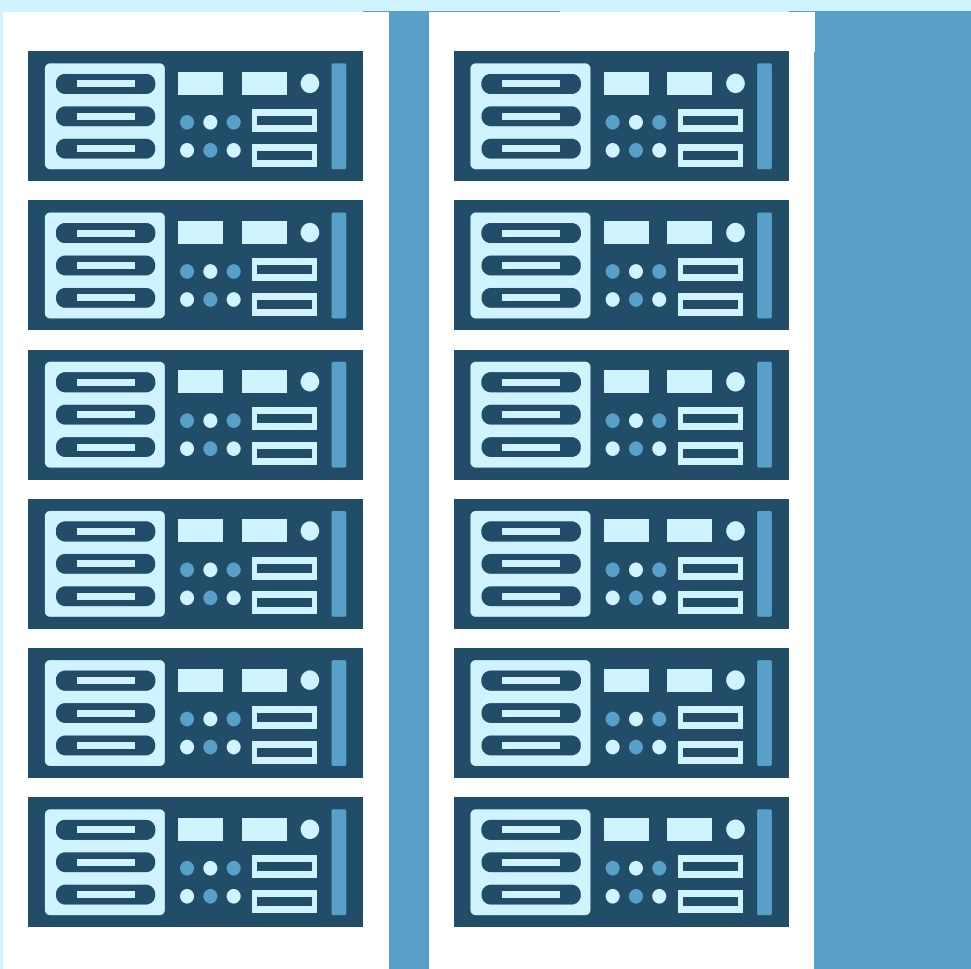
Relational & Non Relational Databases

Learn about the incredibly prevalent databases today. Through this course, you'll develop strong fundamentals and be proficient in concepts related to Databases and DBMS. Most importantly, you'll also be able to perform powerful queries on databases using SQL.

Relational Databases

- Introduction
- SQL
- Aggregation, Relationships, Join
- Normalisation & Advanced SQL Querying
- ACID Properties

Non Relational Databases (MongoDB)

- Introduction to MongoDB
- CURD operations
- Querying Documents
- Aggregations
- Nested Documents

Course Project

Generate insights from raw data by applying various complex aggregations and advanced queries.

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Backend Development with Node & Express

In this course, you'll learn how to build a backend web application using one of the most popular and mature Javascript web development frameworks, Express. It lets you build better web apps quicker, and with less code. This course covers various aspects of web application development like database routing, urls etc.

Introduction to NodeJS

- Node REPL
- Modules
- NPM CLI
  - > Usage of NPM Packages

Introduction to Express Web Application Framework

- HTTP Server
- Routes
- Handling HTTP Request
- Preparing HTTP Response

Fundamentals of Application Building in Express

- Integration with Database
- CRUD Operations
- Error Handling
- Middlewares

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Course **Project**

Build your rst web application, A Q&A
platform similar to StackOver ow
using ExpressJS.

Securing APIs

- Json Web Token(JWT)
- Authentication vs Authorization
- Building Secure Web API's with Express

Debugging

- node inspect
- Visual Debugging

Capstone Project - Slot Booking Application like BookMyShow

In this project, you will be developing a Slot Booking Application that provides a user with an easy way of booking movie tickets online. Users can view various booking slots available and select the preferred date and time.

Tools and Technologies used

- HTML
- CSS
- JS
- AWS
  - S3
  - Route53
  - Cloudfront
- Express JS Server
  - CRUD API's
  - Express Middlewares
- Designing & Querying Relational Database

Capstone Project - Build a social networking web app

In this project you will be developing a Social networking web app with popular features like post, comment.

Tools and Technologies used

- HTML
- CSS
- JS
- AWS
  > S3
  > Route53
  > Cloudfront
- Express JS Server
  > CRUD API's
  > Express Middlewares
- Designing & Querying Relational Database

Placement support classes

- General Sessions
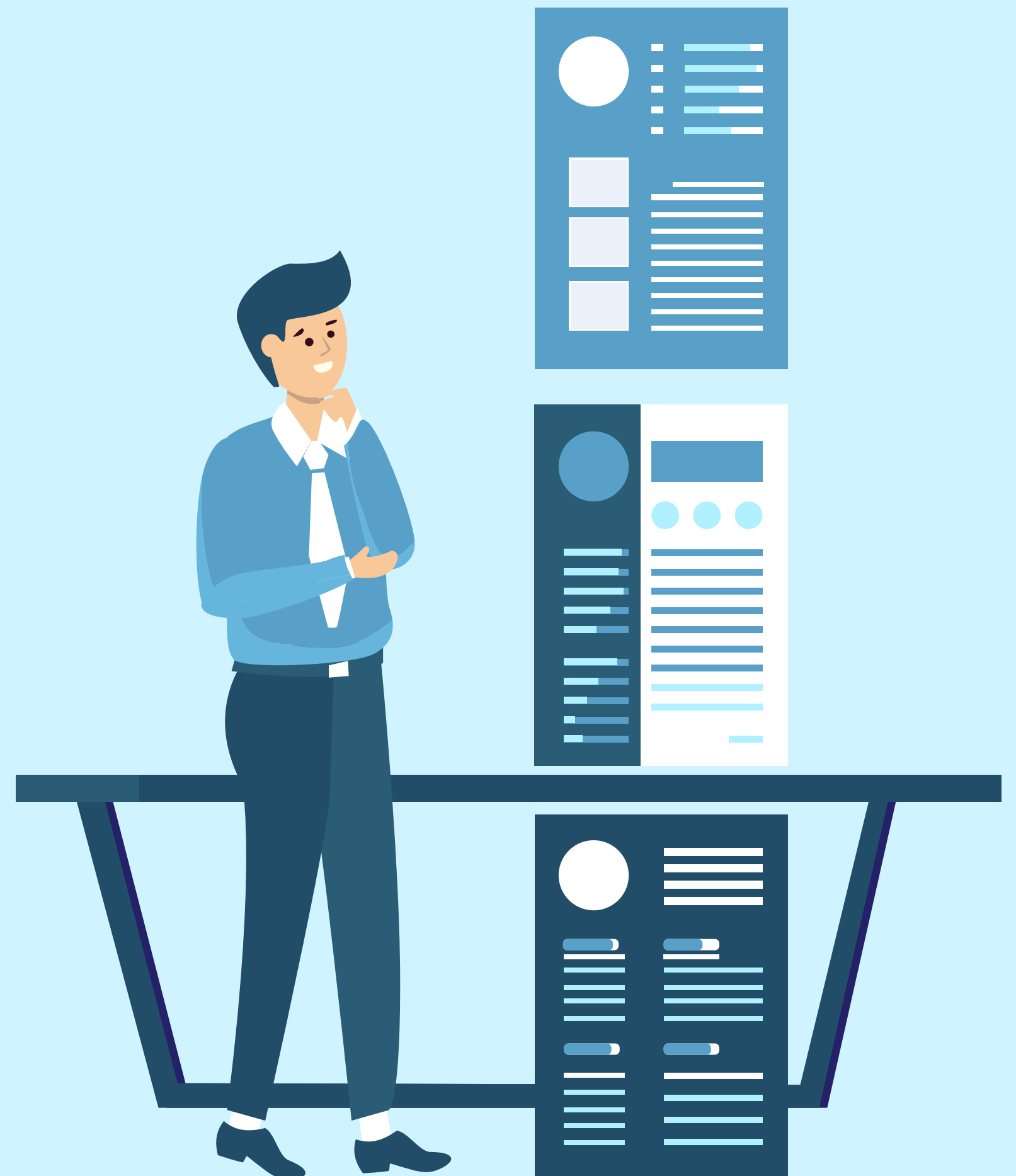- Technical Session

Complete Resume and CV writing

- Resume
- CV
- Bio Data
- Difference between Resume and CV
- Do's & Don'ts of resume writing
- Hiring Process
- Unlimited resume templates
- Company research before a Job interview

Coding Interview Questions & Coding Exercises

- Problem-solving tips
- Coding Exercises

Interactive Q&A sessions

- Discussion on the Work atmosphere
- Discussion on job responsibilities
- Discussion on career

Your **Mentors**

Shyam Anand
Tech Lead at Google

Amrit Sanjeev
Staff Developer
Advocate at Google

Narayan Babu
Vice President
Zeta Suite
Ex-Truecaller, Glance

Anil Unnikrishnan
Founding Member of
Samsung's Technology
and Advanced Research
(STAR) Lab

Your **Trainers**

Amrith M
Software Engineer at
Coinbase | Ex-Amazon

Husni Mubarak
Senior Associate at
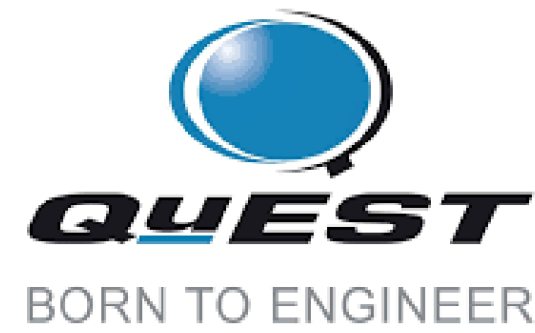Morgan Stanley | Ex-Dell

Gokul G Nair
Full-Stack Developer,
Ex Professional
Tech-Trainer at ICT

Shameel K
Full-Stack Developer
Totto Learning

Hiring Partners

Thank You