



Cyber BOOTCAMP

Learn To Earn From Cyber Treasure

A Flagship Initiative of:

Quaid College of Management & Technology

(Recognized by: Punjab Skill Development Authority and Pakistan Training Bureau, Govt. of Pakistan)





Prep Class - Duration (4.5 Weeks) Responsive Website

Training Projects : 30

Assignment Projects : 20

Modern, semantic and accessible HTML5, including flexbox and CSS Grid for layout. How to plan, sketch, design, build, test, and optimize a professional website. How to use common components and layout patterns for professional website design and development.

Core Programming

Year 1 - Advance CSS3

W1/26

Training Project : 1

Assignment Projects : 3

CSS techniques to create stunning designs and effects, Advanced CSS animations with @keyframes, animation and transition. How CSS works behind the scenes: the cascade, specificity, inheritance, etc. CSS architecture: component-based design, BEM, writing reusable code, etc. Flexbox layouts: build a huge real-world project with flexbox. CSS Grid layouts: build a huge real-world project with CSS Grid. Using Sass in real-world projects: global variables, architecting CSS, managing media queries, etc. Advanced responsive design: media queries, mobile-first vs desktop-first, em vs rem units, etc. Responsive images in HTML and CSS for faster page loads. SVG images and videos in HTML and CSS: build a background video effect, The NPM ecosystem: development workflows and building processes.

Year 1 - Sass Projects

W2/26

Training Project : 1

Assignment Projects : 2

You will be able create a portfolio website completely on Intermediate CSS Flexbox. You will learn the advanced level of CSS Grid. Create a villa booking website completely on CSS Grid. Learn how to setup Sass by two methods. You will be able create a fitness website using CSS Flexbox, CSS Grid and Sass with DARK MODE.

Year 1 - Sass Component Development

W3/26

Training Project : 1

Assignment Projects : 9

Create your own reusable Variables Component for Colors, Screen sizes and Typography and implement them in web page. Create your own reusable Buttons Components and implement them in web pages. Create your own reusable Cards Components and implement them in web pages. Create your own reusable Navigation Components and implement them in web pages. Create your own reusable Form Components and implement them in web pages.

Year 1 - Bootstrap with Sass

W4/26

Training Project : 1

Assignment Projects : 9

Learn and create amazing high quality Bootstrap 5 themes and UIs from scratch. Learn the Bootstrap 5 utilities, classes, components & JS widgets using a custom sandbox environment. Learn to design and develop your own Bootstrap 5 Templates from scratch. Use the latest HTML5 and CSS3 to add unique styling to Bootstrap. Learn how to work with responsive images and icons. Learn how to create forms and to choose great fonts for your website, Learn how to use Bootstrap 5 JavaScript.

Year 1 - Java Script DOM

W5/26

Training Project : 1

Assignment Projects : 2

Latest JavaScript (including ES6/ES7/ES8/ES9/ES10/ESNext). Learn how HTML, CSS and JavaScript relate to each other. The fundamentals of JavaScript. How to write JavaScript in the console. Learn how your website can come alive with actions, like zitsy changes on clicks, colour wheels, dropdowns, response on form submissions. How your browser creates a DOM tree. Become a pro at creating elements in the DOM. The difference between the DOM, JavaScript and Python, Parent, Sibling and Children DOM relationships. The different types of Nodes. The difference between an HTMLCollection and NodeLists. How you can find the DOM. How you can access elements in the DOM. Master the skill of traversing (walking) up and down the DOM. How to remove items from the DOM. Cloning elements in the DOM, Parent, Sibling and Children DOM relationships.





Year 1 - AJAX, JSON, XML, Fetch API, XHR

W6/26

Training Project : 1

Assignment Projects : 2

Learn the fundamentals of AJAX without third party libraries. Become a fullstack developer by knowing how to send data to a server, listen for a response and do something with the data. Learn how to dynamically update a webpage without a page refresh. Become a pro at AJAX and learn about Streams, Promises, Event Loops and more. Learn JSON and XML data formats (and the XML DomParser), and how you can use them with AJAX. Understand Promises. Learn about the Streams API. Learn about the latest techniques (such as the Fetch API) to make an AJAX request. Understand where AJAX came from and why it was invented. Understand the HTTP protocol and how browsers communicate with servers. Learn why we need to use the `NEW` keyword with the XHR object. Understand constructor functions. Master the XMLHttpRequest() object. Learn the differences between asynchronous and synchronous code. Learn how to handle errors with AJAX. Become an expert at using the Fetch API. Understand how to use Async & Await keywords with the newer Fetch API. Learn how to send authentication information using XHR and Fetch. What are RESTful APIs. How to use AJAX with XHR, Fetch and Axios. How to access JSON and text data from a server response. What is Apache and how it differs from Node. How to set up an Apache server, a PHP server and a Node server. Single-Origin-Policy vs CORS. Pre flight vs Simple CORS requests. Basic HTTP Authentication using AJAX. How to allow cross-domain requests with AJAX. How to access XML data from a server response. What happens when an AJAX request arrives at the server. How a server can handle an AJAX request. How to use Postman to test your server side routes. How to use Nodemon to speed up your server side development process. ES Modules vs CommonJS modules. What are CORS errors, and how you can fix them.

Year 1 - Working with Serverside / Data Driven Javascript

W7/26

Training Project : 1

Assignment Projects : 20

How to connect to Web APIs make AJAX requests with JavaScript. Applying JavaScript to create Data driven Web Content. Create Interactive Web Content generated from JSON data. JSON data and how to use JSON as JavaScript Objects within Code. Creating Dynamic Data driven Web Applications with JavaScript. Update parts of a web page, without reloading the whole page. Create User-Friendly interactive web applications. Boost the performance of your web pages. How to create Responsive user interfaces. Modern JavaScript Coding to apply and use JSON data within Web Pages.

Year 1 - Web Forms (PHP/Node server) with Javascript

W8/26

Training Project : 1

Assignment Projects : 20

Learn about HTTP and how it relates to HTML. Learn how to use AJAX to submit form data to a server, build many dynamic front-end forms. Master client-side validation by using both HTML and JavaScript, Understand how to create custom error messages with the ConstraintValidation, Learn how to extract form key:value pairs using the URLSearchParams() API, mastering advanced front-end website development, Design and create forms to get the response you desire, be successful, Learn about the different form controls available and they work with javascript, Master the <input> types like text, password, email, tel, color, date, number with Javascript, Master non <input> form controls like textarea, output, progress & meter bars with Javascript, Learn why the browser implement URL Encoding when a user submits a form, Understand URL encoding with Javascript, Understand how a server receives data from a form with Javascript, Learn how to start a PHP server and receive form data (real example), Learn how to start a Node server and receive form data (real example), Understand why a user can type international characters into your form even though URL encoding specifies it has to be ASCII characters, Learn how to build envied forms with elements like <datalist> and <select>, Learn how to view HTTP request header and body information, Learn about the <form> attributes (such as action, method, autocomplete, novalidate, enctype, REL, and more), Understand why a GET request appends the form data to the URL, Learn why the browser appends the form data to the body of the HTTP request on a POST request, Doing help learning and we work through lots of examples together, Understand multipart/form-data and why do you need it when uploading files, Understand the difference between radio buttons and checkboxes, Understand how to listen for events on form controls (such as the input or change event), Build dropdown controls, progress bars, meter bars, and a whole bunch more, Learn how to listen for different types of events, such as submit, input, change, etc. handle with DOM, Understand the ACTION and METHOD attributes, Understand the accept-charset (ISO vs ASCII) attribute, Learn about Numerical Character References, Easily master the original <input> types (such as password, text, hidden and more), Learn how to build functional forms using <fieldset>, <legend> and <inputs>, Learn the 2 ways to create submit buttons on forms. Be an expert on the newer <input> types like email, search, tel, number, date and more.





Year 1 - CSSOM, Render Tree, HTTP, HTTP/2, TCP

W9/26

Training Project : 1

Assignment Projects : 3

Understand the CSSOM, Render Tree and Layout. Master HTTP, HTTP/2. Learn how to optimize any website for speed by writing better code. Learn where to write your JavaScript for optimized performance (we take an advanced look at async, preload, defer, etc.). Understand the Network Panel, Performance Panel and Audit Lighthouse functions within DevTools. Understand HTTP, TCP, Data Packets and a whole bunch more. Real examples of how AJAX works (we use both the XMLHttpRequest object and the newer Fetch API). Master the Critical Rendering Path. Understand what are Render Blocking Resources and how we solve this problem. Write JavaScript and understand what a Polyfill does. Write your own Polyfill. Introduction to HTTP/2 and how it improves the current HTTP/1.1 protocol.

Year 1 - AJAX & DOM & Web Forms Practice Projects

W10 & W11 /26

Training Project : 1

Assignment Projects : 25

Master the DOM (document object model) and AJAX. Modular learning sections with real world projects with pure JavaScript using DOM interaction and AJAX. How to create elements dynamically and more - With Games and Amazing Projects to Build. Master JavaScript Skills variables, boolean logic, if/else, loops, functions, arrays, etc. Wow create real-world apps with both ES5 and ES6+.

Year 1 - Google App Script Concepts

W12 & W13 /26

Training Project : 1

Assignment Projects : 100

Access to built in libraries that can really power up your Google Workspace App. Connect Google Workspace applications like Gmail, Calendar, Drive, and more, Interact with other Google services Calendar, Drive, Gmail, and Maps. Nothing to install - code editor right in your browser. Your scripts run on Google's servers. Extending Google Workspace with Add-ons. Rapid application development platform based on JavaScript that lets you create business and productivity applications quickly and easily. Loaded with Google Apps Script Code Examples - 100s mini-projects code snippets to do amazing things with Google G Suite - Sample projects to create advanced functionality with Google Apps - Google Services, Add custom menus, dialogs, and sidebars to Google Docs, Sheets, and Forms. Publish web apps — either standalone or embedded in Google Sites. Create customized user interfaces that are directly integrated into Google Workspace applications. Boost workflow efficiency when working with Google Workspace by automating or streamlining tasks. Connect to non-Google services within Google Workspace applications, allowing you to retrieve or upload data from those services into and from Google Workspace.

Year 1 - Google App Script 16 Projects (Real Time)

W14 & W15 /26

Training Project : 1

Assignment Projects : 15

Project Title - Form Submission auto response - Create custom responses and run code all triggered by a user submission of form data. Connecting Google Suite together to make things happen. This is a common and simple application that can be really useful in a number of ways. Project Title - YouTube API - Connect to YouTube - get content from YouTube that you can use within your application. This section demonstrates utilizing the power of YouTube, searching and retrieving video information back into a web app. Create a webapp with Google Script that can be used to search YouTube and video results. Project Title - Spreadsheet User data Project - Add user data to a Spreadsheet, then take action from the Spreadsheet UI to send emails and update the data. This is a dashboard designed to help manage user lists and send out emails all done within a Spreadsheet. Project Title- Spreadsheet Mini Projects - A collection of useful code snippets that do commonly asked for things within Spreadsheets. Explore functionality that can be extended upon to create useful additions to your web applications. Code snippets and mini projects that you can connect and extend upon. Project Title - Spreadsheet Data as API JSON - Explore how you can output JSON data from your spreadsheet and use within your websites as a data source and content. Use JavaScript fetch to connect to the JSON data coming from Google Scripts Web App. Project Title - GDrive Image Gallery - Use your Gdrive as a source for website images, creating an image gallery project to showcase images from your drive. Project Title - HTML5 Canvas image uploader - Fun project that allows users to create images within HTML5 Canvas, and save them to Gdrive. Upload images into canvas then add text and logo then save as an image to GDrive.





Year 1 - Google App Script 16 Projects Continue....

W14 & W15 /26

Project Title - HTML editor saving HTML files - Using CKEditor create and save HTML files on GDrive. Select existing files from Gdrive and update the content of the file. Fun mini project that focuses on GDrive and file management. Project Title - Simple AutoResponse - Mini project to demo creating an email template, using triggers to automate form responses and tracking data into Spreadsheets. Project Title - PDF Uploader - Mini Project using Google Script to create files, use of blobs for PDF and sending of emails. Project Title - GmailApp - Send email with an image attachment that will be copied to your GDrive and moved to another label within your Gmail Folders. Project Title - WebApp Sheet data as API - Explore how you can output Sheet content into a Web API as JSON data. Project Title - Google Apps Script Consent Form Exercise - JavaScript Cloud - Useful project on how to create a webapp form have users select fill it out and get a PDF of their response info. Project Title - Google Sheets as JSON data source for JavaScript - Using Google Sheets as a source for data for your website. Project Title - Build a team site on sites. Google Apps Script - Project Exercise Spreadsheet web app Team Site on Sites. Posting board where users can post messages. Project Title - Simple Google Sheet input Project Submit data to your spreadsheet from your website.

Year 1 - Uploader App - Post App - PM App - CMS App

W16/26

Training Project : 1

Assignment Projects : 3

Title - Build your own post application. Project Title - PDF uploader Project App. Project Title - Google Apps Script to create a GSuite integrated project management app within Spreadsheets. Project Title - Google Apps Google Script - Content System Web App Project.

Year 1 - (PWA) that feels like an iOS & Android App

W17/26

Training Project : 1

Assignment Projects : 2

Build web apps that look and feel like native mobile apps for iOS and Android. Use service workers to build web apps that work without internet connection (offline-first). Leverage device features like the camera and geolocation in your web apps. Use web push notifications to increase user engagement with your web apps.

Year 1 - JavaScript Patterns, MVC & Stencils.js

W18-19-20/26

Training Project : 1

Assignment Projects : 24

Build beautiful real-world projects for your portfolio! In these projects, you will learn how to plan and architect your applications using flowcharts and common JavaScript patterns. Learn modern JavaScript (ES6+) from the beginning: arrow functions, destructuring, spread operator, default arguments, optional chaining (ES2022), and more. How JavaScript works behind the scenes: engines, the call stack, hoisting, scoping, the 'this' keyword, reference values, and more. Deep dive into functions: arrow functions, first-class and higher-order functions, bind, and closures. Deep dive into object-oriented programming: prototypal inheritance, constructor functions (ES5), classes (ES6), encapsulation, abstraction, inheritance, and polymorphism. Deep dive into asynchronous JavaScript: the event loop, promises, async/await, and error handling. You will use these to access data from third-party APIs with AJAX calls. Stencil.js is a tool that makes native web components by using modern features like TypeScript and JSX.

Year 1 - JavaScript Algorithms and Data Structures

W21/26

Training Project : 1

Assignment Projects : 1

You learn how to analyze your code's time and space complexity using Big O notation. We cover the ins and outs of Recursion. We learn a 5-step approach to solving any difficult coding problem. We cover common programming patterns. We implement popular searching algorithms. We write 6 different sorting algorithms: Bubble, Selection, Insertion, Quick, Merge, and Radix Sort. Then, we switch gears and implement our own data structures from scratch, including linked lists, trees, heaps, hash tables, and graphs. We learn to traverse trees and graphs, and cover Dijkstra's Shortest Path Algorithm. The section also devoted to Dynamic Programming.





Year 1 - Data Visualizations with JavaScript & Google Cloud

W22/26

Training Project : 1

Assignment Projects : 2

You will learn how to use Firestore (from Google Firebase) - a real-time NoSQL database in which we can store our data. We'll use this to power our D3.js visualizations in real-time (without updating the browser) and to make them interactive, fun & dynamic. We'll also be creating 3 projects to put our D3 & Firebase skills to the test - first of all a money planner called Baba Wonga, then a fitness tracker called The Baba Dojo and finally a company employee tree diagram called Baba Corp.

Year 1 - Machine Learning using Javascript and TensorflowJS

W23/26

Training Project : 1

Assignment Projects : 2

Advanced memory profiling to enhance the performance of your algorithms. Build apps powered by the powerful **TensorflowJS** library. Develop programs that work either in the browser or with **Node JS**. Write clean, Easy to understand **ML code**, no one-name variables or confusing functions. Pick up the basics of **Linear Algebra** so you can dramatically speed up your code with **matrix-based** operations. (**Don't worry, we'll make the math easy!**). Comprehend how to twist common algorithms to fit your unique use cases. Plot the results of your analysis using a **custom-build graphing library**. Learn performance-enhancing strategies that can be applied to any type of **Javascript** code. **Data loading techniques**, both in the browser and Node JS environments.

Year 1 - Javascript Weird Parts

W24/26

Training Project : 1

Assignment Projects : 2

Write solid, good Javascript code. Understand advanced concepts such as closures, prototypal inheritance, IIFEs, and much more. Drastically improve your ability to debug problems in Javascript. Avoid common pitfalls and mistakes other Javascript coders make. Understand the source code of popular Javascript frameworks. Build your own Javascript framework or library.

Year 1 - Javascript Interview Questions

W25 & 26 /26

Real-world JavaScript interviews questions asked in IT companies. Q&As that you'll need to become a JavaScript expert. Apply for JavaScript jobs anywhere in the world. Core concepts and features you need to know in JavaScript development. JS Language, Arrays, OOPS, DOM & Web, Asynchronous JS, Map, Set, WeakMap & WeakSet (ES6 Data structure), Automated Testing. Lectures & topics focused on real-world coding problems.

React Certified Specialist

Option 1

Year 1 - Applications with Node JS, Express & MongoDB

W1/26

Training Project : 1

Assignment Projects : 2

A note-taking app to get your feet wet. A weather application that interacts with the MapBox and Dark Sky APIs. A task manager REST API complete with user accounts and authentication. A real-time chat app with a client-side companion. By the end, you'll be able to take what you've learned and launch your own Node application.

Year 1 - CMS Using Node.js, Mongo, Handlebar and AJAX

W2/26

Training Project : 1

Assignment Projects : 2

NodeJS applications like the CMS and deploy Nodejs Apps on the Cloud.





Year 1 - Node.js a real-world RESTful API and Web app

W3/26

Training Project : 1

Assignment Projects : 2

Be building you own fast, scalable, and powerful Node.js RESTful APIs or web applications. Be able to work with NoSQL data and model data in real-world situations. Know how modern back-end development works, and how all the different technologies fit together. Have experience in professionally-used tools and libraries like Express, Mongoose, Stripe, Sendgrid, Atlas, Compass, Git, Heroku, and many more. Have built a complete application, which is a perfect starting point for your own applications in the future.

Year 1 - Redis, Clustering & S3 With Node.js

W4/26

Training Project : 1

Assignment Projects : 2

Master the Node Event Loop - understand how Node executes your source code. Understand the purpose of Node, and how the code you write is eventually executed by C++ code in the V8 engine. Add a huge boost to performance in your Node app through clustering and worker threads. Turbocharge MongoDB queries by adding query caching backed by a lightning-fast Redis instance. Scale your app to infinity with image and file upload backed by Amazon's S3 file service. Implement a continuous integration testing pipeline so you always know your project functions properly. Think you know everything there is about managing cookies and session? Ensure your app works the way you expect with automated browser testing using Jest and Puppeteer.

Year 1 - GraphQL with Node.js and Apollo

W5/26

Training Project : 1

Assignment Projects : 2

Model your application data using schemas. Create queries and subscriptions allowing clients to access data in the database. Create mutations allowing clients to create and change data in the database Query and change your data from the browser by making requests with Apollo Client. Work with the Prisma ORM (v1) to communicate with your database via a GraphQL API. Deploy your GraphQL applications to production. Secure your application data with an authentication system. Write an automated test suite for your application.

Year 1 - NodeJS with GraphQL, AWS Cloud

W6/26

Training Project : 1

Assignment Projects : 2

Build enterprise level Node applications and deploy to the cloud (AWS). Learn to build secure and performant, large scale applications like a senior backend developer. Lead NodeJS projects by making good architecture decisions and helping others on your team. Using NodeJS, build production grade apps including REST APIs and GraphQL APIs. Work with real life data and SpaceX API to build a NASA launch system, discover new planets that may contain life + other projects, Authentication, File I/O, Databases (SQL, MongoDB), Express Framework, Sockets, plus many other important topics a backend developer should know. Build a MERN (MongoDb, Express, React, Node) fullstack app and deploy to production. Load balancing, Monitoring, CI/CD, and Zero Downtime Deployment. Become the top 10% Node Developer.

Year 1 - NodeJS with React Hooks and Redux.

W7/26

Training Project : 1

Assignment Projects : 2

The first app, a decision-making app called Indecision, is our starter application. You'll learn the fundamentals of React while seeing exactly what it takes to get a React app up and running. The second app, an expense manager called Budget, has all the features you'd expect from a real application. You'll set up authentication, user accounts, routing, testing, form validation, database storage and more.

Year 1 - GraphQL apps with React and Node

W8/26

Training Project : 1

Assignment Projects : 2

Learn the process of combining a backend server with a front end React. Grasp the difference between GraphQL, Apollo, and Relay, and when to use each. Build servers that can be used with both React applications. Learn the core principles of navigation with React Router and GraphQL.





Year 1 - GraphQL, React, Material UI, Nodejs 60 Projects

W9/26

Training Project : 1

Assignment Projects : 59

For Example : Ebay Clone, Netflix Application, Youtube App, CMS, Facebook, Bootcamp Quiz, Library, Expenses Tracker, Tour Booking, Interwood, PSL, Gloria Jeans Cafe, Biryani Express, Music Player.

Year 1 - Two Huge Industrial Applications Using React

W10/26

Training Project : 1

Assignment Project : 1

Stylo Shoes Complete Application and Rozee.pk Complete Application.

Year 1 - Zameen.com React js 18, Firebase 9 & Tailwind CSS 3

W11/26

Training Project : 1

Assignment Project : 1

Create a React js project from scratch. Use Firebase auth for complete authentication. Use Firebase Firestore to store and fetch data. Learn how to sign up/in the users using username/password and Google oAuth using Firebase auth. Add forgot password functionality using Firebase auth. Work with latest versions like React js 18, Firebase 9 and Tailwind CSS 3. Learn the CRUD operations including create, read, update and delete using Firebase Firestore. Learn react router version 6 (latest version) to create routes, get the params and redirect. Learn how to create pages and routes in a react project. Learn how to use react toastify , create nice notifications. Learn to create private route and custom hook for protecting the user profile page. Learn how to create a beautiful spinner and loader. Learn important react event listeners like onChange and onSubmit. Create a reusable component such as listing cards. Create an image slider using Swiper js latest version. Add map to the page using leaflet and react leaflet packages. Learn how to deploy to vercel. Learn Google geolocation api and how to convert address to latitude and longitude. Learn how to use Tailwind CSS 3 to style a react project. Learn useEffect and useState react hooks.

Year 1 - Techjuic.com MERN & Tailwindcss Full Blog API

W12/26

Training Project : 1

Assignment Project : 1

How to create a complete MERN stack project from scratch to finish. How to implement authentication both in server side and client side. How to block and unblock a user. How to upload images to cloudinary. How to resize image on the server. How to create a complete Blog API. How to send email using sendgrid. How to reset password. Forget password functionality. How to use redux - redux toolkit to manage the application state. How to implement follow and unfollow of a user API. How to implement account verification using token.

Year 1 - E-commerce app with React, GraphQL, Firebase

W13/26

Training Project : 1

Assignment Project : 1

Build enterprise level React applications and deploy to production (using React 18!). Learn to build reactive, performant, large scale applications like a senior developer. Learn the latest features in React including Hooks, Context API, Suspense, React Lazy. Master the latest ecosystem of a React Developer from scratch. Using GraphQL as a React Developer. Use Redux, Redux Thunk and Redux Saga in your applications. Learn to compare tradeoffs when it comes to different state management. Set up authentication and user accounts. Use Firebase to build full stack applications. Learn to lead React projects by making good architecture decisions and helping others on your team. Master React Design Patterns. Learn CSS in JS with styled-components. Routing with React Router. Converting apps to Progressive Web Apps. Testing your application with Jest, Enzyme and snapshot testing. Handling online payments with Stripe API. Using the latest ES6/ES7/ES8/ES9/ES10/ES11 JavaScript to write clean code.

Year 1 - NextJS enterprise level fullstack app

W14/26

Training Project : 1

Assignment Project : 1

Build REAL enterprise level NextJS applications and deploy to production. Learn to build reactive, performant, large scale applications like a senior developer. Learn the latest features and tools in the NextJS ecosystem including, SWR (React Hooks), Hasura, Serverless Functions, Vercel, Framer Motion + more. Learn the different rendering techniques: static site generation, server side rendering, incremental static regeneration, hydration, etc... Using GraphQL as a NextJS Developer. Become the top 10% NextJS Developer. Set up authentication and user accounts (including password-less login!). Using Airtable (which is exploding in popularity) to build full stack applications. Learn about SEO and how to use NextJS to have your applications rank on Google. Master the latest ecosystem of a NextJS Developer from scratch. Learn to lead Next JS projects by making good architecture decisions and helping others on your team.





Year 1 - Nextjs Instagram, Twitter, IMDB and Google Apps.

W15/26

Training Project : 1

Assignment Projects : 3

Learn to build 4 practical powerful NextJS apps including Twitter, IMDB, Instagram, and Google. Learn all about rendering techniques such as how to build static site pages, server side rendering and incremental static regeneration, learn about pagination, image uploading functionality, and state management using recoil. Learn how to use Firebase for database and storage. Learn how to use next-auth for authentication. Learn how to use IMDB and google search APIs. Learn how to deploy your apps using vercel with your own custom domain name.

Year 1 - Serverless App (Next JS 10+), (React 16+) & Vercel

W16/26

Training Project : 1

Assignment Project : 1

First, we are going to integrate the base layout of the application. We will break the layout into small pieces, and we will create lots of reusable components such as a navbar, portfolio card, and many others. I will explain how server-side rendering works, how to use different data fetching techniques, and the differences and benefits of fetching on the server versus the client. The first big feature we will be working on will be authentication. The Auth0 provider will handle authentication. Nevertheless, there will be a lot's work to handle. Users will register and login and experience feature only for authenticated users. You will learn how to restrict access to pages and manage authentication state through your application, resulting in UI changes of the application layout. Next, we will work on portfolio features. We will implement functionality to create a portfolio, and I will explain how to manage forms easily. Then we will look at update functionality, where I will show you how to populate inputs with existing data. At the end of the section, we will work on delete functionality. All of the features will be reactive and updating view in real-time, and You will learn how to create fast static pages with new Next.js functions. The blog feature will be the biggest one. Users will create blogs using a slate editor that offers different formatting options. Each blog will be saved initially as a draft blog, and it will be a user's responsibility to publish it. For this purpose, we will create a dashboard page displaying all user blogs to publish or make a draft from the blog. All Published blogs will be highlighted on the blogs page and created as static pages assuring better performance. We will create delete and update functionality as well. Next, we will work on SEO(search engine optimization) improvements. I will explain the basics of SEO and how to get it working with Next.js. The last section will cover deployment. Express API server will be deployed to Heroku. Next.js portfolio application will be deployed to the serverless Vercel platform, making our application super fast on the internet.

Year 1 - React Next.js Node API AWS

W17/26

Training Project : 1

Assignment Project : 1

Learn to Build Highly Scalable App, Learn to use AWS S3 (Simple Storage Service) for File Uploads, Learn to use AWS SES (Simple Email Service) for Sending Emails, Learn to use AWS EC2 (Elastic Compute Cloud) for Hosting your App in the Cloud. Learn to use AWS Route 53 for Domain/DNS Management. Learn to use AWS IAM (Identity & Access Management). Learn to write custom rules/policy fo accessing AWS services. Learn to use Mongo Atlas as a Managed Database in the Cloud. Learn to build SEO React Apps with Next Js. Learn to Implement Secure JWT Based Authentication System. Learn to Build an Application that can Grow Infinitely in Future.

Year 1 - GraphQL & Next JS at AWS Cloud, AppSync & Amplify.

W18/26

Training Project : 1

Assignment Project : 1

Develop a production-ready serverless backend API powered by AWS AppSync and GraphQL that scales to MILLIONS of requests. Deploy a fully functional blogging application using the AWS Amplify framework. Learn how to develop Real-Time Subscriptions with AWS AppSync for real-time scalable updates for your web applications. Managed GraphQL works in AWS with AWS AppSync.





Year 1 - Websites with latest version of Gatsby.js

W19/26

Training Project : 1

Assignment Project : 1

Build Awesome Projects, Build Blazingly Fast Websites, Become Better React Developer

Year 1 - Jamstack with React, Gatsby, and Strapi.

W20/26

Training Project : 1

Assignment Project : 1

Create cutting-edge full stack applications while enhancing your developer experience using the JAMstack. Implement a comprehensive e-commerce architecture with real-time inventory, favorites, reviews, and subscriptions. Streamline performance, security, and accessibility plus programmatically create pages with our static site generator Gatsby. Easily manage content and automatically serve it through an API to drastically simplify backend development with our headless CMS Strapi. Serve customers with a completely custom cart and checkout system powered by Stripe, allowing users to save payment methods and access order history. Integrate a JWT authentication workflow with sign up/login, forgot/reset password, and social media integration. Adopt modern React best practices by using functional components, React Hooks, and the React Context API. Leverage the power of GraphQL with native support from both Strapi and Gatsby to seamlessly interact with backend data. Deploy our project from development to a live production application on AWS and Netlify. Breathe life into your applications by adding animations with react-spring & react-lottie. Extend your reach and enhance performance with Search Engine Optimization (SEO) and powerful, automatic Image Optimization. Access components from a vast component library, apply a powerful JSS styling solution, consolidate common styles in a theme, and adjust your styles and layouts based on screen size with responsive design - all using Material-UI.

Year 1 - React Native App - Native App

W21/26

Training Project : 1

Assignment Project : 1

Develop apps that are unique, fun, and responsive. Build on both Android and iOS platforms. Master integration with Firebase for user authentication. Learn the core principles of navigation with React Native.

Year 1 - React Scalable apps with microfrontend architecture

W22/26

Training Project : 1

Assignment Project : 1

Learn design patterns used by the largest companies in the world. Understand when to use microfrontends. Link multiple apps together using a tiered routing system. Scope CSS on your page to prevent cross-app contamination. Avoid sharing state between apps to promote isolation. Deploy each portion of your app independently to avoid production bugs. Scaffold a CI/CD pipeline to automate your release process. Utilize multiple front-end frameworks in the same app. Maximize performance by using module federation.

Year 1 - Build, deploy, and scale an E-Commerce app

W23/26

using **Microservices** built with Node, React, Docker and Kubernetes

Training Project : 1

Assignment Project : 1

Architect large, scalable apps using a collection of microservices. Deploy a multi-service app to the cloud with Docker and Kubernetes. Solve concurrency issues in a distributed systems environment. Leverage your Javascript skills to build a complex web app. Build a Server-Side Rendered React App to render data from your microservices. Understand how enterprise companies design their infrastructure. Share reusable code between multiple Express servers using custom NPM packages. Write comprehensive tests to ensure each service works as designed. Communicate data between services using a lightning-fast event bus.

Year 1 - Ethereum, Solidity, and Smart Contracts to build

W24/26

production-ready apps based on the **Blockchain**

WEB3 v1.0

Training Project : 1

Assignment Project : 1

Understand the why engineers would want to create an app with Ethereum. Build compelling blockchain applications using the Ethereum Blockchain. Design, test, and deploy secure Smart Contracts. Learn the true purpose and capabilities of Ethereum and Solidity. Use the latest version of Ethereum development tools (Web3 v1.0). See practical examples to comprehend what the blockchain and mining are.





Year 1 - Master DApp Development

W25/26

Smart Contracts - Solidity, Web3, React, Mocha, Ethereum

Blockchain Programming for Front-end

Training Project : 1

Assignment Project : 1

Write, compile, debug, and deploy multiple smart contracts. Use professional testing unit suites to check blockchain data. Learn how the front end interacts with blockchain data. Deploy and hook up to local test networks and run transactions on the Ethereum blockchain in real time. Build your own ERC20 Token. Reverse Engineer a decentralized banking system with Yield Farming Staking & Rewards from scratch. Start working remotely freelancing on DApp and Smart Contract projects in the Ethereum Blockchain world.

Year 1 - Build a Full-Stack Blockchain & Cryptocurrency

W26/26

A backend + frontend with Node.js, Express and React

Blockchain Programming for Full Stack

Training Project : 1

Assignment Project : 1

Create unique blockchain-centric solutions to real work problems and business applications. Build proof-of-work based systems. Create backend Node JS servers, with an express API and full testing suite. Build server-to-server systems with real-time networking capabilities. Build frontend web applications, particularly with React JS. Deploy full-stack projects for wide use by the public. Employ software best practices and coding conventions to write clean, scalable code.

Flutter Certified Specialist

Option 2

Year 1 - Flutter SDK & Flutter Framework

W1-2-3/26

Training Project : 1

Assignment Project : 1

A thorough introduction to Flutter, Dart and the concept behind widgets. An overview of the built-in widgets and how you may add your own ones. Debugging tips & tricks. Page navigation with tabs, side drawers and stack-based navigation. State management solutions. Handling and validating user input. Connecting your Flutter app to backend servers by sending Http requests. User authentication. Adding Google Maps. Using native device features like the camera. Adding beautiful animations & page transitions. Image Upload. Push Notifications - manual approach and automated. How to publish your app to the app stores.

Year 1 - Flutter SDK & Flutter Framework

W4-5/26

Flutter 3.0 & Firebase Raheem Store Grocery App

Training Project : 1

Assignment Project : 1

Build a fully functioning Flutter application with Firebase. Teaching how to write Clean-code and avoid Boilerplate code. A fully functional app that is ready for use and deployment. Fully Functional Flutter Grocery app with WEB Admin panel. Flutter SharedPreferences. Clear state management with Flutter Provider State Management. Flutter StreamBuilder & FutureBuilder. Firebase Firestore, Authentication & Storage. Payment gateway. Write production-ready code following best practices and become a competent Flutter developer.

Year 1 - Flutter SDK & Flutter Framework

W6/26

E-Commerce Multi Shop App

Daraz.pk App

Training Project : 1

Assignment Project : 1

Build a fully functioning Flutter application with Firebase. Learn how to write Clean-code and avoid Boilerplate code. A fully functional app that is ready for use and deployment. Fully Functional Flutter Grocery app with WEB Admin panel. Flutter SharedPreferences. Clear state management with Flutter Provider State Management. Flutter StreamBuilder & FutureBuilder. Firebase Firestore, Authentication & Storage. Payment gateway. Write production-ready code following best practices and become a competent Flutter developer.





Year 1 - Flutter 3.0 Rest API

W7/26

Geo News App

Training Project : 1

Assignment Project : 1

Flutter AppBar. Flutter Material Design. Flutter Row and Column. Flutter ListView Builder. Payment gateway.

Year 1 - Develop iOS & Android App

W8-9/26

Food Delivery & Food Ordering App

FoodPanda App with Admin WEB Portal

Training Project : 1

Assignment Project : 1

How to allow suppliers to upload Products to their stores or to application in general. How to Stream Data again from firebase Cloud to your application and arrange them in pages and categories. How to allow Customers to Add Items to Cart and help them to place an Order. How to make your application intelligent and treat the input data we are getting from users. How to Integrate Stripe Payment Account and link it to your application to receive payments Online. How to add Animations to your Design.

Year 1 - Develop iOS & Android App

W10-11 /26

Largest Ride Sharing

Uber App

Training Project : 1

Assignment Project : 1

Build Fully Functional Drivers App. Build Fully Functional Users App. Google Maps Api. Learn Google Maps Api Integration in Flutter Apps. Learn Google Map Implementation in Flutter Apps. Learn Real Time Location Tracking on Google Maps. How to Draw Routes between Source and Destination Locations
Learn Flutter Backend App Development. How to work and Communicate with API's. Direction Api Places Api [Auto Complete Search Location]. Advanced State Management. Provider State Management and much more.

Year 1 - Develop iOS & Android App

W12-13 /26

Amazon Clone App with Web Admin Panel & Push Notifications

Amazon/Flipkart App (Multi-Store)

Training Project : 1

Assignment Project : 1

Android & iOS Fully Functional e-Commerce App with Admin Web Portal. Real Time Push Notifications System. Advanced Provider State Management. Cloud Messaging. Cloud Storage. Cloud Firestore. Flutter FrontEnd App Development. Flutter BackEnd App Development. Flutter Full Stack Mobile & Web App Development. Shared Preferences. Local Storage. Authentication System.





Year 1 - iOS & Android App

W14-15-16-17 /26

Building Instagram, TikTok, Twitch, Zoom & WhatsApp!

Build 5 Social Media Apps

Training Project : 4

Assignment Project : 1

Features of the projects we are going to build:

1. Instagram

Responsive Instagram UI. Email & Password Authentication. Share Posts with Caption. Display Posts with Caption. Like & Comment on Posts. Search Users. Follow Users. Display User Posts, Followers & Following. EVERYTHING REAL TIME. Sign Out.

2. TikTok

Authentication with Email & Password. Uploading Videos with Caption. Compressing Videos. Generating Thumbnails Out of Video. Displaying Videos with Caption. Liking on Posts. Commenting on Posts. Liking the Comments. Searching Users. Following Users. Displaying Followers, Following, Likes & Posts of User. TikTok Like UI.

3. Zoom

Google Sign In. Create New Meeting. Join Meeting. Mute/Unmute Audio. Mute/Unmute Video. Change Display Name while Joining. Raise Hand. Start Screen Sharing. Mute Everyone. Start Live Stream. Screen Share. Chat. Switch Front/Rear Camera. Picture in Picture. Enter Tile View. Disable Camera. End Call. See Your Meeting. History. Log out.

4. Twitch

Email & Password Authentication. Screensharing. Selecting Thumbnail. Going Live. Joining LiveStream. Switching Camera. Muting/Unmuting. Chatting. Cross Platform. Responsive UI. Token Generation using GO (Create Your API). Deploy Server. Deploy Website.

5. WhatsApp

Phone Number Authentication. 1-1 Chatting with Contacts Only. Group Chatting. Text, Image, GIF, Audio(with Recording), Video & Emoji Sharing. Status/Stories Visible to Contacts Only and Disappears after 24 hours. Video Calling. Online/Offline Status. Seen Message. Replying to Messages. Auto Scroll on New Messages. Caching Images & Video.

Year 1 - Flutter Certified Application Developer

W18/26

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Answer Explanations and References. Exam AFD-200.

The questions are as per the AFD-200 exam syllabus of the official documentation. Retake Endlessly - You can retake the exams as many times as you want. 100% Exam Coverage - Tests are updated regularly to keep them up to date with the current syllabus. Detailed Explanations - You get detailed explanations for all the answers with reference links and official documentation. Mimic Real Exam - 45 multiple-choice questions, duration is 90 minutes and passing grade is 70%.

Year 1 - Flutter Certified Application Developer

W19-20-21/26

Based on Official Syllabus Topics of Actual Android.

Answer Explanations and References. Exam AFD-200.

During the preparation, you can be confused about Android exam question types, exam pattern, and allocated time to attempt questions of the Android Flutter Certified Application Developer certification exam. Study4Exam helps you to remove these doubts with 3 formats of its Android AFD-200 exam preparation. We ensure that you will easily pass the Android Flutter Certified Application Developer exam either by using AFD-200 PDF questions or taking the practice exam is web-based and desktop formats. You can prepare AFD-200 practice questions in PDF format at any time and from any place with smartphones, laptops, or tablets. Preparation evaluation is very helpful to remove mistakes and successfully prepare for the Android Flutter Certified Application Developer AFD-200 exam. The AndroidFlutter Certified Application Developer AFD-200 practice exam is one of the key steps of your exam preparation plan to identify your preparation mistakes, strengthen weaker areas of the preparation, and get familiar with the actual exam environment. Web-based and desktop Android AFD-200 practice exams are available to help you do self-assessment.





Year 1 - Flutter Certified Application Developer

W22-23/26

Based on Official Syllabus Topics of Actual Android.

Answer Explanations and References. Exam AFD-200.

AFD-200 Exam Official Topics:

- Topic 1: Dart Functions & Object-Oriented Programming/ Installing Dart IDE and Writing Dart Program
- Topic 2: Dart Project Structure and Dart Libraries/ Creating a Dart Project Using IntelliJ IDEA
- Topic 3: Providing Constructors for Your Classes/ Android Studio Software Prerequisite
- Topic 4: Create a Small Overtime Payment Program/ Introduction to Flutter and Dart Programming Language
- Topic 5: Run your Flutter App on Android Phone/ Test Your Flutter App on iOS Phone with Windows O.S
- Topic 6: Testing and Feedback for Your App/ Publishing Android App on Google Play Store
- Topic 7: Run your Apps on a Hardware Device (Physical Phone)/ Installing and Configuring Flutter SDK
- Topic 8: Run your Flutter App on iPhone Device/ Navigation and Routing a Pizza Store App
- Topic 9: Creating a Flutter App using BottomNavigationBar Navigation Technique/ CheckboxGroup and RadioButtonGroup Widgets
- Topic 10: Creating a Flutter App Using Widgets/ RaisedButton, FlatButton, and IconButton

Year 1 - Flutter Certified Application Developer

W24-25-26/26

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