

CAREER TRACK PROGRAM

# Full Stack Web Development with Python & JavaScript

# OVERVIEW

Our goal for this career track program is to onboard learners from any stage of their web development journey and prepare them as culminated full stack developers in the market. In just 4 months, a graduate of this program will become a certified full stack developer and be able to build complete web and hybrid mobile solutions. You will master front-end, back-end and server-side web & mobile application development using HTML/CSS, modern JavaScript, React (Redux), React Native, SQL, Python and Django!

This career track includes 8 courses and 22 projects. Each project & assignment you do will be an opportunity to apply what you've learned in the courses and demonstrate to potential employers that you have practical full-stack development skills.

Even if you do not have any prior coding experience, you will do just fine if you follow the program with due effort.

# HTML5, CSS3, BOOTSTRAP 4

People who are participating in the career track program, pretty much have some prior knowledge of these. So, we did not want to include this in the official syllabus and make it more lengthy. But, we have created a separate course with HTML5, CSS3, and Bootstrap 4 for those of you that have no knowledge about these three topics initially. When you register for the career track program you will automatically gain access to the HTML, CSS, and Bootstrap course. Bottom line- you can participate in this program even if you don't know how to code right now.

## Introduction and Prerequisite

Introduction  
how to use this course  
Software installation  
hello world and VScode introduction

## HTML Tags

HTML Tags  
HTML Basic  
HTML Elements  
HTML Attributes  
HTML Headings  
HTML Paragraph  
HTML Style  
HTML Formatting

HTML Quotations  
HTML Comments  
HTML CSS  
HTML Link  
HTML Image  
HTML Table  
HTML List

HTML Block  
HTML Classes  
HTML Id  
HTML Iframes  
HTML Javascript  
HTML Responsive  
HTML Guide

## Html Forms

HTML Forms  
Form Elements  
Form types  
Form input Attributes  
Input Form Attributes

## HTML Media

HTML Media  
HTML Audio  
HTML Video  
HTML Youtube

## HTML Api's

HTML Geolocation  
HTML Drag and Drop  
HTML Web Storage  
HTML Web Workers

## CSS Basic Components

CSS Basic  
CSS Syntax  
CSS Selector  
CSS Adding  
CSS Comments  
CSS Color  
CSS Background  
CSS Borders  
CSS Margin  
CSS Padding  
CSS Height/Width  
CSS Box Model  
CSS Outline  
CSS text

CSS Model  
CSS Fonts  
CSS Icon  
CSS Links  
CSS List  
CSS Table  
CSS Display  
CSS Max Width  
CSS Position  
CSS Overflow  
CSS Float  
CSS Inline Block  
CSS Align  
CSS Combinators

CSS Pseudo class  
CSS Pseudo  
Elements  
CSS Opacity  
CSS Navigation Bar  
CSS Drop Down  
CSS Image Gallery  
CSS attr selector  
CSS Form  
CSS Counter  
CSS Website Layouts  
CSS Units  
CSS Specificity

## CSS Responsive

RWD Intro  
RWD Viewport  
RWD GridView  
RWD Media Queries  
RWD Images  
RWD Videos  
RWD Frameworks

## Introduction to Bootstrap 4

BS4 Intro  
Why Bootstrap?  
BS4 Get Started

## Bootstrap Components

BS4 Containers  
BS4 Grid Basics  
BS4 Typography  
BS4 Colors  
BS4 Table  
BS4 Images  
BS4 Jumbotrons  
BS4 Alert  
BS4 Buttons  
BS4 Button Groups  
BS4 Badges  
BS4 ProgressBar  
BS4 Spinner

BS4 Pagination  
BS4 List Group  
BS4 Card  
BS4 Dropdown  
BS4 Collapse  
BS4 Navs  
BS4 NavBar  
BS4 Forms  
BS4 Input  
BS4 Input Group  
BS4 Custom Forms  
BS4 Carousel

BS4 Modal  
BS4 Tooltip  
BS4 Popover  
BS4 Toast  
BS4 Scrollspy  
BS4 Input Group  
BS4 Custom Forms  
BS4 Utility  
BS4 Flex  
BS4 Icons  
BS4 Media Object  
BS4 Filters

## Project using Bootstrap



# MODERN JAVASCRIPT PROGRAMMING

Our long journey is going to start with JavaScript. You will learn everything from the fundamental concepts to object-oriented programming, ES5, ES6, DOM, AJAX, JSON, API, and complete 3 projects with this knowledge. Basically, from this section, you are going to gain the confidence and the solid foundational knowledge that you need to learn JavaScript frameworks and libraries.

## JavaScript Introduction

Getting Started  
Now Start Coding!

## Variables, Operators and Data Types

Variables and Constants  
Operators  
Data Types  
Template Literals

## Control Flow

Conditions  
Loops  
Functions

## OOP and DOM

Object Oriented Programming  
Document Object Model

## Error Handling and Regular Expression

Error Handling  
Regular Expression

## JSON and Asynchronous Programming

JavaScript Object Notation (JSON)  
AJAX  
Fetch API

## Hand-On JavaScript Projects

Project 1: Task List  
Project 2: Book List  
Project 3: GitHub Finder

## Bonus Section

Leveling Up to ES6  
What's Next: JavaScript Libraries & Frameworks  
What's Next: Full Stack Web Development  
What's Next: Node.js and NPM

# REACT FOR FRONTEND DEVELOPMENT WITH REDUX

We have chosen the most demanding, worldwide coveted JavaScript library REACT for front end development. In this section, you will learn to develop the most powerful and scalable web applications from scratch using react, redux, router, and modern JavaScript.

## Getting Started!

Node and NPM  
Version Control  
Full Stack Web Development

## What is React?

Introduction to React  
React Components

## React Hooks, Router, Forms

React Hooks  
React Router  
React Forms

## Applying Redux

Introduction to Redux  
React Redux Form  
Redux Actions  
Redux Thunk

## Using JSON Server

Client-Server Communication  
React Animations



# REACT NATIVE FOR MULTIPLATFORM APP DEVELOPMENT

In this section, you will learn to develop a completely native mobile app that you can connect to the web codes to make it a truly multi-platform application. We are going to build a mobile app while explaining the essential concepts of react native and then build another one after the discussion. After learning react with redux followed by react-native you will undoubtedly strive forward in terms of skills, flexibility, and confidence.

## What is React Native

- Introduction to React Native
- React Native Components
- React Native Navigation

## Adding Some Functionalities

- Icon Fonts and Buttons
- Setting up a simple Server
- Introduction to Redux for React Native
- Forms and Modals

## Buttons, Animations and Redux Store

- Swipe Option Buttons and Alerts
- Animations
- Persist Redux Store

## Using Expo SDK and Some Other Features

- Social Sharing
- Picking an Image
- Network Info

- The Expo SDK
- Secure Store
- Local Notifications

# PYTHON PROGRAMMING

In this section, you will be introduced to python. You will learn everything that is essential from the syntax, conditional logic, file handling, Data structure, recursion, to object-oriented programming. In this section, you will get the preparation that is needed to move forward into the applied fields of Python and web development frameworks like Django and Flask.

## Introduction to Python

Introduction to Python  
Python, Pycharm download and Introduction to Pycharm  
Course Content

## Python Basics

Operators  
Variables  
Boolean operators  
A small program  
Practice-1  
Practice-1 Solution

## Flow Control

Conditional Statements  
Loop  
A few programs with loops  
Practice-2  
Practice-2 Solution

## Functions

Introductions to functions  
Keyword Arguments  
A few programs with functions  
Practice-3  
Practice-3 Solution

## Lists

Introduction to python lists  
List Methods  
A few programs with lists  
Tuples and references  
Practice-4  
Practice-4 Solution

## Files & File Functions

Files Introduction  
CSV File manipulation  
Practice-5  
Practice 5 Solution

## Dictionaries

Dictionaries, what even are they?  
Dictionary Methods  
A few programs with Dictionaries  
Practice-6  
Practice-6 Solution

## Recursion

Intro to Recursion: One of the powerful programming techniques  
A few programs with Recursion  
Practice-7  
Practice-7 Solution

## Object Oriented Programming with Python Part-1

Python String Formatting Basics  
Python OOP Intuition  
Python OOP Basics  
Python Instance Variables  
Python Regular Methods

Python Class Variables  
Python Decorators - Part 1  
Python Decorators - Part 2  
Python Class and Static Method  
Python Object Sorting

## Object Oriented Programming with Python Part-2

- Python Inheritance - Part 1
- Python Inheritance - Part 2
- Python Multiple Inheritance
- Python Composition
- Python Magic Method - Part 1
- Python Magic Method - Part 2
- Python OOP Mini Project - Overview
- Python OOP Mini Project - Work Out

## SQL FOR DATABASE

In this section, you will learn all the tidbits of SQL. Here, you will learn everything starting from the basics such as creating a database table, updating and deleting data, importing data through a query. LIMIT, WHERE, and JOIN statement, primary and secondary key along with connecting to the MySQL server using Python and running a query. And hopefully, you won't ever be afraid of working with the database for backend development after that.

### Introduction to SQL and Database

- Introduction to DBMS and SQL

### Getting Yourself Ready

- Data Types
- Setting Up MySQL with Wamp Server
- Download Data and Script Files

## Special Session: Running SQL within Python

Installing Necessary Packages  
Running Jupyter Notebook  
Connecting with Database  
Running SQL query within Python

## SQL Fundamentals Part-1

Create and Insert Into Statement  
Table Creation and Importing Data in MySQL  
Select and From - Part 1  
Select and From - Part 2  
Drop-Update-Delete

## SQL Fundamentals Part-2

Distinct  
Limit  
Order By  
Where Clause  
Derived Column

Like  
Not  
And  
Or  
Between

## Relational Database and SQL Join

Relational Database and ERD  
Join Types  
Join Example - Part 1  
Join Example - Part 2



## Aggregations of SQL

Sum  
Min and Max  
Average  
Count

Group By - Part 1  
Group By - Part 2  
Having

# BACKEND DEVELOPMENT WITH DJANGO

And now, you're going to learn to do the complete backend development of a website using the most popular framework of python-Django. That means you will learn everything from database to templates, URL, forms and modals, managing user authentication, payment gateway, multimedia, REST API, virtual environment, deployment, and also learn to complete 3 different projects using the Django framework.

## Django Set Up

Setup and Installation

## Django Basics

Django Project and Application  
Views, URLs, Templates

## Models and Forms

Django Models  
Django Forms

## Relative URLs and Templates Related Topic

Relative URLs  
Template Filter and Inheritance

## CRUD using Mysql, User Authentication

CRUD using MySql  
User Authentication

## CBV, REST API, Virtual Environment & Deployment

Class Based View  
Virtual Environment  
Using REST API  
Deployment

## Projects Demonstration

Developing A Blog with Django  
Developing A Social Media Website with Django  
Developing An eCommerce Website with Django

# REACT WITH DJANGO REST API

By the time you reach this section, you have already learned a lot. Now it's time to coordinate and combine everything. Now you are going to learn to use Django REST API to connect the front-end and back-end of a complete website and deploy that on a server. You will basically complete your Full Stack journey with the section. And as always you are going to learn everything through real-time projects.

## Django REST Api

## React with Django Api

## Deployment

# WHY IS THE BOHUBRIHI CAREER TRACK PROGRAM SO SPECIAL?

It is special because of some "unconventional" advantages that are not possible to be dedicatedly delivered in regular online or offline courses. We have launched this new web development career track only after ensuring these advantages.



## 1. Live mentor support

There will be a software engineer online and available to answer your questions and needs 6 days a week (4 hours per day). If you post about your troubles and queries on the discussion forum within the Support Hour, you will immediately get support. And if you post on the forum after the Support Hours, the mentor will reply to you the next day during Support Hours.



## 2. 11 projects

Yes, it sounds like a lot but we are going to show you 11 total projects during our whole program. Some of these projects are going to be developed as the project concepts are being explained to the learners, and the rest are going to be shown as Capstone Projects after the concepts have been explained properly. You will also be provided with the source code so you can practice with them. The features that have been shown in these projects are going to give you the courage to start working on any kind of web application development if you practice enough.



### 3. Manual projects review and personal feedback

You are going to have to complete and submit 11 projects as course assignments outside of the 11 projects that are going to be shown to you during the program. During your four months of learning, every time you submit an assignment we are going to manually review it and let you know of the personal feedback via email. And if you secure the passing score after review, you will get a certificate for each individual assignment. That means you get 11 certificates if you can pass in these 11 assignments. Other than that you will have a quiz after every lesson to test out your concept and theory and the scores from these quizzes and assignments are going to factor into your final result after finishing the course.



### 4. 8 live sessions

We are going to arrange a video live session every two weeks where you get to discuss your progress, different difficulties that you are facing, and future plans directly with your instructors. The plan is to keep the sessions informal and friendly where you get to hang out with your instructors and mentors twice a month. And hopefully, we will have created an amazing professional network amongst us by the end of it.





## 5. Creating your professional brand

Towards the end of the program we are going to arrange a session briefing you on resume building, your LinkedIn profile, and presenting yourself on GitHub the right way. If you follow through the whole program correctly, you will have an extended portfolio of solving 22 amazing projects by the end of it. And we will show you how to create and maintain that portfolio for the best impression.



## 6. Job and interview preparation

There will be an extended session towards the end of the program with guidelines on how web developers are hired locally and internationally, and how you can prepare for it, where to practice, what kind of portfolio you should have, how to look for a job and apply for it, what kind of questions there will be in an interview, how to prepare for those questions, what kind of criteria these companies look for, and how to meet those criteria, etc.



## 7. Internship opportunities

The resumes of those who will perform the best in these four months (people who have finished the projects correctly within 4 months, have earned skills, have been able to create a portfolio and professional presence following the program, have been sincere, and have earned the most scores) are going to be sent to our different partner companies for internship and different attachment opportunities. Please note that we are not promising or guaranteeing any job or internship. We have made the deal without partner companies that we are only going to be the mediator in sending your resumes of the best performers to the right companies but after reviewing your CV or resume, offering you the job or the internship is completely up to the company itself.



## 8. Freelancing guideline

To be honest, the career track program was not designed keeping freelancing in mind. Our focus is going to be mostly on the learning aspect more so than the earning aspect. We believe if you can be confident in your own learning you can definitely become courageous enough to explore the rest. Our objective for this program is to create that confidence in our learners. All that being said, if we get a considerable amount of requests from the learners after the program starts, we will try arranging a live session to give you guidelines on freelancing as well.

# ABOUT BOHUBRIHI

Bohubrihi is an edTech company that offers superior online courses, professional training and corporate eLearning services to help you master new skills and accomplish more in life. These courses and programs are designed & offered in collaboration with the best of industry experts and organizations in Bangladesh.

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