

# Full Stack

# WEB DEVELOPMENT



**HTML**

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and Scripting languages such as JavaScript.

**CSS**

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

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## ABOUT US

PNY Trainings is the first choice of students who want to excel in the field of Internet Marketing. PNY Trainings consists of top-level trainers who are adept in the fields of Internet Marketing. We are the pioneer institute that started comprehensive training for the benefit of students. Since our launch, hundreds of students have been trained and secured good jobs in the expanding IT industry, as we all know. Contact us and Secure your seat for upcoming trainings, events, and seminars.

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**200+**  
INSTRUCTORS

**100+**  
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## WHY US ?



11+ Years of Excellence



Experienced Trainers



Jobs Placement Cell



Practice-Based Learning



Career Oriented Learning



Industry Connectivity

## WE OFFER



Development



Marketing



Art & Design



Multimedia



Networking & Cyber Security



Business & Accounts



Languages

# SALIENT FEATURES



PNY Trainings



Follow-Up Sessions



Practical learning



Internships/Jobs  
Opportunities



Learning Management System



Expert Mentorship

## WHY THIS COURSE ?

- Interactive use of initial technologies to decision makers
- Write codes that are relevant and clear for the back end and also for the front end
- To create new effective and creative features must link with the graphic designers.
- You will be able to talk Correctly with other UX Design professionals

## COURSE OBJECTIVES:

As a master of multiple programming languages, it refers to the entire depth of a computer application system. It includes front-end and back-end multiple components in a software application that works together to ensure running the site/application smoothly. There is plenty of seasoned front-end and back-end developers for their complete solution, the Full Stack Developer scope for growth in the IT industry which is more diverse and multidimensional.

## WHO SHOULD TAKE THIS COURSE ?

Those who have educational backgrounds regarding this are more than welcome because things would be more convenient for them. Website designers and developers who want to become professionals in full-stack development. Employees of website development companies or professionals who want to polish their skills in an advanced way can join us.

## AFTER COMPLETING THIS COURSE, A TRAINEE WILL LEARN:

- After Completion of the subject student should able to
- Building more complex applications using software development techniques and showcasing how your creations are easily accessible via the Web
  - Web Development from Scratch - Frontend & Backend (Beginner to Advanced)
  - Clearly understanding of software engineering fundamentals and their applications
  - Learning various data-exchange mechanisms (ex: HTTP) to get complete perspective of Full Stack
  - Training on live projects to enhance your development abilities

# AI TOOLS

## INCLUDED IN COURSE OUTLINE

- 01 **TENSORFLOW** 
- 02 **CHATGPT (OPENAI API)** 
- 03 **GEMINI** 
- 04 **CLARIFAI** 
- 05 **HUGGING FACE** 
- 06 **DEEPAI** 
- 07 **ZOHO AI** 

# COURSE OUTLINE

## MODULE TOPICS:

1. FRONT-END (HTML5, CSS3, BOOTSTRAP (BOOTSTRAP STUDIO OPTIONAL, TAILWIND OPTIONAL, MATERIAL UI OPTIONAL), JAVASCRIPT, JQUERY, PHP (BASIC), MYSQL (BASIC),
2. PHP + MYSQL + LARAVEL
3. MERN (MONGODB, EXPRESSJS, REACTJS, NODEJS) + NEXTJS + TAILWIND CSS

### 1: HTML

- INTRODUCTION
- HTML BASICS
- PARAGRAPH
- HEADINGS
- IMAGES
- LISTS
- FORMS
- TABLES
- DIV ELEMENTS
- BLOCK ELEMENTS
- INLINE ELEMENTS

### 2: CSS (CASCADING STYLE SHEET)

- INTRODUCTION CSS3
- CSS3 COLORS
- CSS3 BACKGROUNDS
- CSS3 BORDERS
- CSS3 PADDING
- CSS3 MARGIN
- CSS3 FONTS
- CSS3 TEXT
- CSS3 SHADOW
- CSS3 LINKS
- CSS3 LISTS
- CSS3 BOX MODEL
- CSS3 POSITIONS

# COURSE OUTLINE

- CSS3 PSEUDO ELEMENTS
- CSS3 FORMS
- CSS3 BUTTONS
- CSS3 FLEXBOX
- CSS3 RESPONSIVENESS

## 3: BOOTSTRAP

- INTRODUCTION TO BOOTSTRAP
- BOOTSTRAP BASICS
- BOOTSTRAP GRIDS
- BOOTSTRAP BREAKPOINTS
- BOOTSTRAP MARGIN
- BOOTSTRAP PADDINGS
- BOOTSTRAP COLORS
- BOOTSTRAP CSS
- BOOTSTRAP JAVASCRIPT

## 4: BOOTSTRAP STUDIO

INTRODUCTION TO BOOTSTRAP

## 5: TAILWIND CSS (OPTIONAL)

- INTRO & SETUP.
- HTML TEMPLATE.
- FONTS & COLORS.
- MARGIN, PADDING & BORDERS.
- TAILWIND CONFIG.
- CUSTOM FONTS.
- USING FLEXBOX.
- RESPONSIVE CLASSES.
- CARDS.
- BADGES.
- @APPLY DIRECTIVE.
- GRIDS.
- BUTTONS.

# COURSE OUTLINE

- ICONS.
- HOVER EFFECTS.
- RESPONSIVE NAV (PART 1).
- RESPONSIVE NAV (PART 2).
- WRAP UP

## 6: JAVASCRIPT PROGRAMMING

- FUNDAMENTALS OF JAVASCRIPT PROGRAMMING FROM THE GROUND UP
- VARIABLES,
- CONDITIONAL LOGIC (IF-ELSE),
- ARRAYS, OBJECTS, & LOOPS
- NEWEST ES6 AND ES7 FEATURES, INCLUDING ARROW FUNCTIONS, LET AND CONST
- FUNCTIONS, PARAMETERS-ARGUMENTS, AND RETURN VALUES
- HIGHER LEVEL FUNCTIONS AND CALLBACKS
- ARRAY AND STRING METHODS
- ASYNCHRONOUS JAVASCRIPT WITH PROMISES AND ASYNC-AWAIT
- APIs (APPLICATION PROGRAMMING INTERFACES)
- PARSING AND WORKING WITH JSON (JAVASCRIPT OBJECT NOTATION)
- CODING INTERVIEW CHALLENGE PREP PROJECTS AND PORTFOLIO DEVELOPMENT JS LIBRARIES, INCLUDING 3D IN THE BROWSER WITH D3, THREE.JS, P5

## 7: JQUERY

- JQUERY SYNTAX
- JQUERY SELECTORS
- JQUERY EVENTS
- JQUERY EFFECTS
- JQUERY HTML
- JQUERY TRAVERSING
- JQUERY AJAX & MISC
- OOPS
- DESIGN PATTERNS OBJECT ORIENTED DESIGN
- JSON
- DOM
- AJAX

# COURSE OUTLINE

## 8: PHP & MySQL

### PART 1: PHP CRASH COURSE

USING PHP

EMBEDDING PHP IN HTML

ADDING DYNAMIC CONTENT

ACCESSING FORM VARIABLES

### PART 2: STORING AND RETRIEVING DATA

OPENING A FILE

WRITING A FILE

CLOSING A FILE

READING FROM A FILE

### PART 3: USING ARRAYS

NUMERICALLY INDEXED

ARRAY ASSOCIATIVE

ARRAYS SORTING

ARRAYS RECORDING ARRAYS

### PART 4: STRING MANIPULATION AND REGULAR EXPRESSIONS

FORMATTING STRINGS

JOINING AND SPLITTING STRINGS WITH STRING FUNCTIONS

COMPARING STRINGS

MATCHING AND REPLACING SUBSTRINGS WITH STRING FUNCTIONS

### PART 5: REUSING CODE AND WRITING FUNCTIONS

USING REQUIRE() AND INCLUDE()

USING FUNCTIONS

PARAMETERS

RECURSION

### PART 6: OBJECT-ORIENTED PHP

OBJECT-ORIENTED CONCEPTS & CREATING CLASSES, ATTRIBUTES, OPERATIONS IN PHP IMPLEMENTING INHERITANCE IN PHP & SIGNING CLASSES  
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# COURSE OUTLINE

## PART 7: MVC WITH LARAVEL

LARAVEL INSTALLATION WORKING WITH FORMS WORKING WITH CONTROLLER

LARAVEL BLADE TEMPLATE WITH BOOTSTRAP RESPONSES WITH HTML

LARAVEL MIGRATION

LARAVEL REQUESTS, MODELS

LARAVEL ELOQUENT ORM

BUILD A COMPLETE APP IN LARAVEL

ROUTING

MVC PATTERN

AUTHENTICATION

SEEDERS

API'S

## PART 8: DESIGNING YOUR WEB DATABASE

RELATIONAL DATABASE CONCEPTS

HOW TO DESIGN YOUR DATABASE & WEB DATABASE ARCHITECTURE

## PART 9: CREATING YOUR WEB DATABASE

CREATING DATABASES AND USERS INTRODUCTION TO MYSQL PRIVILEGE

SYSTEM SETTING UP A USER FOR THE WEB CREATING DATABASE TABLES

## PART 10: WORKING WITH YOUR MYSQL DATABASE

INSERTING, RETRIEVING AND UPDATING DATA IN TO THE DATABASE

ALTERING TABLES AFTER CREATION

## PART 11: ACCESSING YOUR MYSQL DATABASE FROM THE WEB WITH PHP

HOW WEB DATABASE ARCHITECTURES WORK

CHECKING AND FILTERING INPUT DATA

SETTING UP A CONNECTION & QUERYING THE DATABASE

# COURSE OUTLINE

## MERN COURSE + NEXTJS

### 1: MODERN JAVASCRIPT / ES6

LET, VAR, CONST  
FUNCTIONS VS. ARROW FUNCTIONS  
DEFAULT PARAMETER FUNCTIONS  
SPREAD OPERATORS  
REST OPERATES  
OBJECT LITERALS  
TEMPLATE / STRING LITERALS  
DESTRUCTURING O ARRAY  
CALLBACK FUNCTIONS  
PROMISES  
ASYNC AWAIT  
**OBJECT**  
MAP  
FILTER  
SET  
REDUCE  
ARRAY  
ARRAYS METHODS

### 2: REACT JS (MODERN WEB LIBRARY)

- INTRODUCTION TO REACTJS
- UNDERSTAND REACTJS LIBRARY & DIRECTORY
- REACT COMPONENTS
- TYPES OF COMPONENTS
- BUILD A SIMPLE REACT COMPONENT
- COMPONENT COMPOSITION
- COMPONENT STYLING
- ADD STYLES TO YOUR COMPONENTS
- COMPONENT INTER COMMUNICATION
- HOW TO PASS DATA FROM ONE COMPONENT TO ANOTHER
- ROUTING
- USING ROUTING TO CREATE SINGLE PAGE APP
- HOOKS
- STATES
- HOOKS VS STATES

# COURSE OUTLINE

- TYPES OF HOOKS
- REDUX
- USING REDUX AS STATE CONTAINER FOR REACT APPS
- REACT BOOTSTRAP
- HOW TO DEPLOY REACTJS APP

## 3: NEXT JS (MODERN FRAMEWORK OF REACT JS)

NEXT JS BASICS OR NEXTJS INTRODUCTION

NEXTJS INSTALLATION

HOW TO START NEXT JS SERVER ?

**NEXT JS PAGES**

WHAT IS PAGE IN NEXT JS ?

WHAT IS A LINK COMPONENT IN NEXT JS

LINKING BETWEEN PAGES IN NEXT JS

SERVING STATIC FILES

SERVING DYNAMIC FILES

**NEXT JS CSS / STYLING**

HOW TO ADD LAYOUT IN NEXTJS

NEXTJS IMAGE OPTIMIZATION

HOW TO ADD CUSTOM LOCAL FONTS IN NEXTJS

DIFFERENT FORMS OF PRE-RENDERING IN NEXTJS

NEXTJS DATA FETCHING METHODS

**WHAT IS SSR IN NEXTJS**

NEXTJS – DYNAMIC ROUTES SEGMENTS

NEXTJS – DYNAMIC IMPORT

**NEXTJS ROUTING OR NEXTJS ROUTING**

NEXTJS NESTED ROUTING

NEXTJS INJECTING THE ROUTER

HOW TO CATCH ALL ROUTES IN NEXTJS ?

**NEXTJS CUSTOM**

NEXTJS CUSTOM SERVER

NEXTJS CUSTOM DOCUMENT

NEXTJS CUSTOM ERROR PAGE

NEXTJS ENVIRONMENT VARIABLES

HOW TO DEPLOY NEXTJS APPLICATION TO VERCCEL

PROJECT IN NEXTJS

# COURSE OUTLINE

## BACKEND DEVELOPMENT AND APIs MAKING USING NODEJS, EXPRESSJS AND MONGODB

### 1: NODE JS

INTRODUCTION TO NODEJS

ARCHITECTURE OF NODEJS

APPLICATION SYNCHRONOUS AND ASYNCHRONOUS PROGRAMMING

CALL BACK FUNCTION IN NODEJS

PROMISES IN NODEJS

MONGODB WITH NODEJS

DESIGN THE SCHEMA IN NODEJS

DESIGN THE REST API'S

GET METHOD

POST METHOD OR PUT METHOD

DELETE METHOD

JSON WEB TOKEN AUTHENTICATION IN NODEJS

CREATE THE AUTH APP IN NODEJS

CREATE THE E-COMMERCE BACKEND

INTEGRATED PAYMENT GATEWAY

### 2: EXPRESS JS

BUILDING RESTFUL API'S USING EXPRESS  
EXPRESS

RESTFUL SERVICES

INTRODUCING EXPRESS

BUILDING YOUR FIRST WEB SERVER

NODEMON

ENVIRONMENT VARIABLES

ROUTE PARAMETERS

HANDLING HTTP GET REQUEST

HANDLING HTTP POST REQUEST

CALLING ENDPOINTS USING POSTMAN

INPUT VALIDATIONS

HANDLING HTTP PUT REQUEST

HANDLING HTTP DELETE REQUEST

# COURSE OUTLINE

PROJECT- BUILD THE GENRES API

EXPRESS- ADVANCED TOPICS

MIDDLEWARE

CREATING A CUSTOM MIDDLEWARE

BUILT-IN MIDDLEWARE

ENVIRONMENTS

CONFIGURATION

DEBUGGING

TEMPLATING ENGINE

DATABASE ENGINES

DATABASE INTEGRATION

AUTHENTICATION

STRUCTURING EXPRESS APPLICATIONS

## 3: MONGO DB

INTRODUCTION TO MONGODB (NO-SQL) O CRUD OPERATIONS

1: CREATE

2: UPDATE

3: DELETE

4: UPDATE

COLLECTIONS IN MONGODB

DOCUMENTS IN MONGODB

DIFFERENCE BETWEEN MYSQL AND NOSQL

INSERTING DATA INTO DATABASE

FILTER QUERIES IN MONGODB DATABASE

SCHEMA VALIDATION IN MONGODB DATABASE

INDEXING IN COLLECTIONS

AGGREGATION IN MONGODB

EMBEDDED DOCUMENT IN MONGODB

# INSTRUCTOR'S PROFILE



## SYED BILAL HUSSAIN

"My name is Syed Mohammad Bilal Hussain, Education: B.E in Computer Systems N.E.D Karachi (2004), M.S in Computer Science Hamdard University Karachi (2008), Certification: PHP and CodeIgniter Training from Sir syed University, Web Development Training Course from N.E.D, Android Apps Development from N.E.D, Working Experience: 15 Years working experience in Web designing and web development (Full Stack Development), Mobile application developer (Android + IOS), Software Developer (Desktop application) in software houses. Wordpress Theme Developer (joomla, drupal, magento).

Teaching 20 years teaching Experience in programming languages like java, c++, c, c#, php ,16 years experience in full stack (web designing and development), 10 Years experience in Mobile application development."



## IMRAN SHABBIR

"Muhammad Imran Shabbir did Mcs Computer Science from Superior University. Mr. Imran deems programming a fun. Certification: MERN (MongoDB, Express, ReactJS, NodeJS) coupled with Firebase, Python, Artificial Intelligence with Robotics, Cloud Computing, Full Stack JavaScript, Core Java, React Native, C++, Web Development, Mobile Application Development. He always delivered the content with amusing and versatile mode in profound manners having adaptable approach in teaching various computer programming languages. He is making a concerted effort to support students with no prior exposure to computer or programming skills. He teaches numerous batches of Full Stack Development (Web Designing & Development / Frontend & Backend)."



## MUHAMMAD NABEEL

My Name is Muhammad Nabeel, by profession, I am a Full Stack Web Developer. I have 2 Years of experience in full-stack web development in Pakistan's top-rated software company. In web development, my speciality is Html, CSS, JS, AJAX, Jquery, AXIES, Bootstrap, React, SASS. In backend Mearn and Mean Stack development, JS Full Stack(Express.js), Core Php/Laravel 9.0 development, and many emerging technologies regarding web development. In database MySQL, MongoDB, Oracle etc. I have also experience in API development, which helps fetch data from DB for web and mobile applications. So, I am also an API developer to Build Restful and working with third-party APIS.



## SALEEM AKHTAR

Saleem Akhtar "Muhammad Saleem did Mcs Computer Science from Bahauddin Zakariya University: MERN (MongoDB, Express, ReactJS, NodeJS) coupled with Firebase, Python, Artificial Intelligence, Full Stack JavaScript, Core Java, React Native, C++, Web Development, Mobile Application Development. Full Stack Development (Web Designing & Development / Frontend & Backend)."

# INSTRUCTOR'S PROFILE



## ADEEL AMJAD

"SYED MUHAMMAD ADEEL AMJAD SHAH

Masters in Information Technology

### CERTIFICATIONS:

- Certification in Software Development
- Certification in Linux Network Administration
- Diploma in Business Software & Web Development
- Oracle ERP - Human Resource Management
- Certification in Oracle ADF using JAVA Technologies
- Oracle Certified Professional OCP (SQL / PLSQL)
- Certification in Database Administration

### SPECIALTIES:

- Team Lead / Project Management / Department Head
- Policy Making / IT Audit / Data Security Analysis & Measures
- New Technologies Study, Innovative Ideas & Implementation
- Change Management, User Trainings & Deployment
- Business Analysis, Design, Development, Documentation & Implementation
- Client Interactions, Testing, Trainings and Presentations
- Cloud Infrastructure Configurations and Implementations"



## HAFIZ FURQAN

I am working as a web developer and android app developer for about 6 years. Also have a teaching experience of web and android of 3 years. Worked as CTO in A - Tech solutions. Currently working as a CTO in legacy ventures. Have developed many projects like healthy stars, cpl, worldtimesinstitute etc.



## MAHAD CHANGAIZ KHAN

Muhammad Mahad Changaiz Khan is an accomplished individual with a Bachelor of Science in Computer Science (BSCS) and holds the prestigious distinction of being a silver medalist. His educational background reflects a strong foundation in various aspects of computer science, including programming, algorithms, data structures, and software development methodologies.



## MUHAMMAD ARSALAN AKMAL

My name is Muhammad Arslan Akmal and I have a bachelor's degree in Computer Science. Programming is my passion from the start because I am a developer with a creative mind and good programming skills. I have more than four years of working experience in Frontend Development and Mern Stack Development with different software houses. There is a plus point for me working on different websites and giving trainings in different Government funded bootcamps powered by PASHA and Techlift.. Currently I am working as the Mern Stack Developer at Arham Soft Pvt. Limited.

# INSTRUCTOR'S PROFILE



## MUHAMMAD ARSALAN

Mr. Arslan is a Computer Engineer also a member of pakistan Engineering Council. He Is a Full Stack Web Developer also Mentor Who has Got Expertise in PHP, Laravel, AWS Amplify ,Reactjs, Nodejs, Nextjs, Nest Commander, Rest API's , Graphql Api's , Web development. He has four Year's professional Experience in Software house as a Full Stack Web Application Development .He has Teaching Experience in Programming Language Like Bootstrap, JAVA SCRIPT, Laravel, Reactjs , Nodejs. He Is Making a concerted effort acclimatize students with no Prior Exposure in Computer or Programming Skills.



## QAIS ALI

I am a full-stack Software Engineer. My background includes serving as a Windows and Web Application Developer. Currently, I am working as a Senior Software Engineer. My responsibilities include web development in .Net core. I have more than 5 years of extensive experience in HTML, CSS, JavaScript-/ JQuery, Bootstrap, ASP.NET Web Forms, ASP.NET Core MVC5, .NET Entity Framework, and SQL server. I have also good experience in WordPress website development, Moodle LMS development and maintenance.



## MUHAMMAD FARHAN

### Experiences & Expertise

- Bachelor in Computer Science (Air University)
- Full stack web developer as well as MEAN/MERN Stack
- 8 years journey of learning and development Specialization in back end Web Development (PHP)
- Expertise in Laravel, Codeignitor, WordPress (PHP) React JS, Angular JS, Node JS, Express JS (JavaScript)
- Play around single page applications (SPA) using React JS
- Worked with advance level applications using Angular JS (chat apps, template builders, real time apps)
- Knowledge about databases ( MySql, MSSQL, Mongo )
- Performed well in teams as well as individually
- Good communication skills while negotiating with clients
- Always ready to learn new techs and tools
- Hosting, Cpanel and Servers configurations
- Free lancing, manage profile, remote services



Pakistan's No. 01  
IT Training Institute



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## ***Our Strength:***

- International Collaborations
- Awarded by USA Education 2.0 

- Multiple Branches in Pakistan
- Affiliated with Govt.(PSDA & PBTE) 



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