

### **About NIDI:**

Established in the year 2011, National Institute of Digital India (NIDI) is a division of Jagriti Navdisha Foundation, a registered nonprofit society Act XXI of 1860 from Govt. of NCT Delhi, which has been in existence with extensive experience in providing computer skills through our courses and training programs.

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# Python with Web Development

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.

**Training Syllabus: 6th Months** 

## Python programming

- Python introduction
- Python basics and program flow
- Functions & Modules
- Exceptions
- File Handling
- Classes in Python
- Regular Expressions
- Data Structures
- Thread in python
- Socket/Network programming in python
- Python with MySQL database

## **TKinter (Desktop App development)**

Writing GUI apps in TKinter.

## Database (MySQL)

- Relational Database Concept and technology
- Web Database Design
- Web Database Architecture
- Creating a MySQL Database
- Creating Database Tables
- Column Data Types
- Implementing Insert/Delete/Update and select Query
- Aggregate Functions
- · Having and Group by Clause
- Joining Table
- Implementing Primary key, Unique Key, Composite key, foreign key, default constraint etc.
- Joining Table
- Dropping Tables and Databases
- Introduction to Phpmyadmin

#### HTML & HTML 5

- Introduction To HTML
- Structure of HTML
- Attributes & Values
- Comments, Header Tags
- Image Tag
- Link Tags (Text & Image)
- Marquee Tag
- List Tag (Ordered & Unordered)
- Table Tag
- Form Tags
- Audio, Video Tags
- About Iframe
- Embedding of Google Maps, YouTube videos
- Block Level and Inline Elements
- DIV Tag
- Header, Footer, Nav
- Section, Article, Aside
- New Form Elements

#### **CSS**

- Document Testing
- About CSS Selectors
- About CSS Properties
- Background Properties
- Box Properties
- Border Properties
- Positioning Properties
- CSS Menu Design
- CSS Animation



# **Bootstrap for responsive design**

- Introduction to Responsive Design
- Introduction to Bootstrap
- Bootstrap Grid System
- Grid Classes
- Equal Columns, Unequal Columns
- Layout Creation

# **JavaScript**

- Introduction to JavaScript
- · Variable, Operators, Conditions
- Looping and Array
- Introduction to functions
- Popup Boxes (Alert, Confirm, Prompt)
- Introduction to functions
- Form Handling
- DOM Manipulation
- Pre- defined functions
- Introduction to Objects
- What is property and methods
- String, Math, Navigator, Date, Array, Window Objects
- Introductions to object based technology
- Class, object, property, inheritance
- Client Side Validation (Regular Expression)

# jQuery introduction

• jQuery Selectors, events, DOM, animations

- jQuery accordions, carousel, tab
- jQuery conflict
- Ajax Implementation
- CRUD Operation with AJAX

# Django (A web development framework in python)

- Django introduction
- MVC (Model View Controller)
- Views
- Templates
- Models
- Django admin interface
- Django Forms
- User Authentication
- Class-Based Views
- Pagination
- Sending mail
- Django Session framework
- Django Middleware

## **API Development:**

It includes development of API for web apps, desktop apps, mobile apps.

### **Project:**

Creating a Dynamic Web Application

- Frontend Using Bootstrap & templates
- Backend Using Templates
- 1 Mini Project
- 1 Major Project

Third party integration for ecommerce apps

- 1. Payment Gateway
- 2. SMS service

## Overview of Data Science with python

- 1. Data analytics
- 2. AI & ML

## Advance topics, mandatory for industry purpose.

# **Web Hosting**

- Manage Domain with name server
- Manage Web Hosting from FTP and CPANEL
- Managing Database, Email Accounts, Sub Domains etc.
- Live your project.

# **Deployment**

Project deployment on live server.

# Git (Version Control) for teamwork

Version control is a practice of tracking and managing changes to software code. It is a software tool that helps software developers teams to manage changes to code over time.

It allows the team members to manage source code on a single project from different machines.

# **Project management tools (Trello)**