

# TheCodeCenter.org

FULL-TIME IMMERSIVE TRAINING CURRICULUM

# SOFTWARE DEVELOPMENT IMMERSIVE.

Duration: 24wks. 9hrs/wk.

## Week 1

Orientation  
Introduction to Programming in C  
Variables and Data Types  
Simple C Programming Applications

## Week 2

Control Statements  
If...else construct  
Loops  
Switch Statements

## Week 3

Arrays  
Multi-dimensional Arrays  
Functions

## Week 4

Writing and Packaging Desktop Applications  
in C Programming Language

## Week 5

Introduction to Programming in C++  
Variables and Data Types  
Simple C++ Programming Applications

## Week 6

Control Statements  
If...else construct  
Loops  
Switch Statements

## Week 7

Arrays  
Multi-dimensional Arrays  
Functions

## Week 8

Writing and Packaging Desktop Applications  
in C++ Programming Language

## Week 9

Introduction to Web  
HTML  
HTML assignments & projects

## Week 10

Introduction to CSS  
Styling HTML content using CSS  
HTML & CSS Projects

## Week 11

Introduction to PHP Programming  
HTML Form processing using PHP  
Form Processing Assignments & Projects

## Week 12

Introduction to Databases using MySQL  
How to write SQL Queries  
Modelling Databases for Applications  
Database Projects using MySQL

## Weeks 13 & 14

Developing Database-driven Applications  
using HTML, CSS, PHP & MySQL

## **Week 15 (Code Camping/Hackathon)**

Electronic Health Record Management System

Food Order/Delivery Application

## **Week 16**

Dev Environment Provisioning with Vagrant

Linux Fundamentals

Installing PHP, NGINX, MYSQL &

PHPMyADMIN on Linux

Shell Scripting Provisioning

## **Week 17**

Introduction to version control with GIT

Git branching, merging, stashing & rebasing

Team Collaboration with GIT

Using GitHub

Pull requests

Git workflow

## **Weeks 18**

Advanced programming techniques with PHP – E-Banking application development

## **Week 19**

PHP OOP, Patterns & Practice

Developing an Inventory Management App using OOP

## **Weeks 20, 21 & 22**

JavaScript Programming

(Node.js, Express.js, MongoDB, Redis)

JavaScript Projects

## **Weeks 23 & 24**

Re-engineering Previous Projects using Up-to-date Knowledge

Deploying Projects to the Cloud

# WEB DEVELOPMENT IMMERSIVE.

Duration: 16wks. 9hrs/wk.

## Week 1

Orientation  
Introduction to Web  
HTML  
HTML assignments & projects

## Week 2

Introduction to CSS  
Styling HTML content using CSS  
HTML & CSS Projects

## Week 3

Introduction to PHP Programming  
HTML Form processing using PHP  
Form Processing Assignments & Projects

## Week 4

Introduction to Databases using MySQL  
How to write SQL Queries  
Modelling Databases for Applications  
Database Projects using MySQL

## Weeks 5 & 6

Developing Database-driven Applications  
using HTML, CSS, PHP & MySQL

## Week 7 (Code Camping/Hackathon)

Electronic Health Record Management  
System  
Food Order/Delivery App

## Week 8

Dev Environment Provisioning with Vagrant  
Linux Fundamentals  
Installing PHP, NGINX, MYSQL &  
PHPMyadmin on Linux  
Shell Scripting Provisioning

## Week 9

Introduction to version control with GIT  
Git branching, merging, stashing & rebasing  
Team Collaboration with GIT  
Using GitHub  
Pull requests  
Git workflow

## Week 10

Advanced programming techniques with  
PHP – E-Banking application development

## Week 11

PHP OOP, Patterns & Practice  
Developing an Inventory Manager using  
OOP

## Weeks 12, 13 & 14

JavaScript Programming  
(Node.js, Express.js, MongoDB, Redis)  
JavaScript Projects

## Weeks 15 & 16

Re-engineering Previous Projects using Up-  
to-date Knowledge  
Deploying Projects to the Cloud

# User Experience Immersive

Duration: 16weeks. 9hrs/wk.

## Week 1

Orientation  
Introduction to the Web  
HTML  
HTML assignments & projects

## Week 2

Introduction to CSS  
Styling HTML content using CSS  
HTML & CSS Projects

## Week 3

Advanced CSS – Positioning  
Web Layouts  
Coding Mockups using HTML & CSS

## Week 4

Coding Mockups using HTML & CSS contd.

## Week 5

Introduction to User Story Mapping  
Conducting User Research

## Week 6

Introduction to Photoshop  
Wireframing design ideas  
Visual Design with Photoshop  
Exporting Photoshop assets

## Week 7

Designing Mockups for Web and Mobile  
Applications using Photoshop

## Week 8

Designing Mockups for Web & Mobile Apps  
Contd.

## Week 9

Converting PSD to HTML  
Coding CSS with precision

## Week 10

Introduction to Design Theory  
Typography  
Grids  
Imagery & Colour

## Week 11

Font-sizing in the browser  
Baseline grids  
Typographical hierarchy  
Constructing grids in Photoshop  
Constructing fluid grids in the browser  
Responsive Web Design

## Week 12

Further exploration on User Research  
Prototyping and testing  
Content Strategy

## Week 13

Interaction Design  
CSS Animations  
Writing CSS with LESS  
Scalable Modular Architecture

## Week 14

Javascript Fundamentals  
Front-End JavaScript  
Animations with CSS3 & JavaScript

## Weeks 15 & 16

Projects

# JAVA PROGRAMMING

Duration: 16weeks. 9hrs/wk.

## Week 1

Installing JDK  
Setting up NetBeans  
Introduction to Java applications  
Writing simple Java Programs

## Week 2

Data Types  
Primitive vs Reference types

## Week 3

Introduction to Classes & Objects  
Methods & Constructors  
Instantiating objects of classes

## Week 4

Control Statements  
If...else construct  
Loops  
Switch Statements

## Week 5

Arrays  
Multi-dimensional arrays

## Week 6

Object Oriented Programming: inheritance  
Object Oriented Programming:  
polymorphism

## Week 7

Exception Handling  
ATM project

## Week 8

MySQL Database  
Database Modeling using MySQL  
Writing SQL queries  
Database Projects using MySQL

## Week 9

Introduction to JDBC  
Installing MySQL Connector  
Connecting & querying a database  
Manipulating databases with JDBC  
Stored Procedures  
Transaction Processing

## Week 10

Modeling/Designing Database for Inventory  
Management  
Developing an Inventory Management  
application

## Week 11

Introduction to files and streams  
Reading data from files  
Writing data to files  
Copying files

## Weeks 12 & 13

Design & Implementation of an E-Payment  
system using Java

## Weeks 14 & 15

Simulating a Recharge Card purchase  
process using Java

## Week 16

Compiling & Deploying Java Applications

# Front End Development

Duration: 16weeks. 9hrs/wk.

## Week 1

Orientation  
Introduction to the Web  
HTML  
HTML assignments & projects

## Week 2

Introduction to CSS  
Styling HTML content using CSS  
HTML & CSS Projects

## Week 3

Advanced CSS – Positioning  
Web Layouts  
Coding Mockups using HTML & CSS

## Week 4

Coding Mockups using HTML & CSS contd.

## Week 5

Converting PSD to HTML  
Coding CSS with precision

## Week 6

Typography  
Grids  
Imagery & Colour

## Week 7

Font-sizing in the browser  
Baseline grids  
Typographical hierarchy  
Constructing fluid grids in the browser  
Responsive Web Design

## Week 8

Prototyping and testing  
Content Strategy

## Week 9

CSS Animations  
Writing CSS with LESS  
Scalable Modular Architecture

## Week 10

Javascript Fundamentals  
Front-End JavaScript  
Animations with CSS3 & JavaScript

## Weeks 11 & 12

Mastering JavaScript React Framework

## Week 13, 14, 15 & 16

Projects Galore  
Uploading Projects to the Cloud

# ANDROID DEVELOPMENT

Duration: 12weeks. 9hrs/wk.

## WEEK 1

Introduction Android Studio Development  
OOP Concept in Java  
Setting up of Android Studio

## WEEK 2

An Overview of Android Architecture  
Creating your First Android App  
Android Activity Lifecycles

## WEEK 3

Build a single screen app  
Manual Xml Layout Design in Android  
Studio  
ListActivity and ListView

## WEEK 4

Intents and Intent Filters  
Score Keeper App

## WEEK 5

Custom Views  
Quiz app

## WEEK 6

Android Notifications  
Using an AsyncTask  
Dialogs and Toasts

## WEEK 7

More UI – options menu,  
Context menu, and web view  
Musical Structure App

## WEEK 8

Android Storage: Network  
File i/o, and shared preferences

## WEEK 9

Android storage: SQLITE  
Content providers  
HTTP networking  
News App

## WEEK 10

Git and GitHub  
Filters in your manifest  
Filters in Dynamic Broadcast Receivers

## WEEK 11

Fragments  
Popular Movies App

## WEEK 12

Make your App Material