

FULL STACK DEVELOPMENT **WEB**



FULL STACK WEB DEVELOPMENT

WHAT WILL YOU LEARN ?

- Learn Web Development from Scratch - Frontend & Backend (Beginner to Advanced)
- Learn to create complex server-side web applications
- Learn Document Object Model (DOM) in JavaScript - Advanced
- Learn to Build applications that can support any front end, and scale to support hundreds of thousands of users
- Learn the Fundamental of PHP and MySQL
- React is a JavaScript library for building user interfaces
- Learn and Apply Media Queries and The Responsive Web Design - To Build Mobile Web sites
- Learn to Build real projects that demonstrate your skills mastery
- Learn MVC Programming
- Learn Database Design and Modeling in MySQL Server (Beginner to Advanced)

PLATFORM

- Linux (Fedora / Mandriva /Ubuntu) or MAC or Windows Host system
- Firefox, Chrome Browsers

REQUIREMENTS

- This course is highly recommended for you if you've never written a line of code
- Passion for learning web development
- Basic Knowledge of Programming will help but is not necessary as this course will start from basics

COURSE OBJECTIVES

- By the end of the program participants will be become an industry-ready engineer who can be readily deployed in a project

WHO IS THE TARGET AUDIENCE?

- Student who want to become the Full Stack Web Developers will find this course very beneficial
- Front end Developers who want to learn backend programming
- Backend developers who want to learn front end programming concepts
- Suitable for beginner programmers and ideal for users who learn faster when shown
- Recommended for people with no programming or app developer experience
- Best for Startup founders who have never written a line of code
- Entrepreneurs who want to learn web development and save money on outsourcing
- Best for Digital Managers who have never written a line of code
- Technical recruitment consultants to understand how the code works

COURSE OVERVIEW

This course delivers a thorough & foundational introduction to programming and usage of the main building blocks of PHP to create applications and further goes on to create web applications in conjunction with web technologies such as HTML, CSS, JavaScript, and Jquery for example. Topics include all major data and control structures, usage patterns, control flow, and OOP. It also extends onto building more complex applications using software development techniques and showcasing how your creations are easily accessible via the web.

The course will cover everything from thinking like a programmer, to practical usage of common software development tools and resources, to key concepts such as data & control structures, usage patterns, control flow, and object orientated programming, as well as leading on to basic web development, utilizing styling, scripting, and backend implementation.



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Designing



Development



Databases



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COURSE FLOW

Full Stack Web developer course starts with introducing participants with front-end technologies (ex: HTML5) and makes them develop responsive one page web application. Followed by that it deep dives into MEAN stack components and brings hands-on perspective to building scalable web applications by leveraging "JavaScript everywhere" phenomenon. Throughout the course foundation paradigms are stressed to ensure participants clearly understand software engineering fundamentals and apply them. The course further covers various data-exchange mechanisms (ex: HTTP) to get complete perspective of Full Stack.

MODULE TOPIC:

1. Front-end (HTML5 | CSS3 | Bootstrap | JavaScript | jQuery | jQuery mobile)
2. Foundation paradigms (OOPS | Design Patterns | Object Modelling | JSON | AJAX)
3. Php & Mysql
4. React Js
5. MEAN Stack (MongoDB | Express Framework | Angular 7 | Node.js)
6. Data Exchange (HTTP)



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1.FRONT-END COURSE MODULE: Hyper Text Markup Language (HTML5)

Module Objectives:

- Building Strong expertise to develop front end application using HTML5
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:

This course provides you hands-on experience and exposure to developing HTML5 based single page application for browsers. This course builds strong foundation on HTML5 which will help developer to use HTML5 concepts for building responsive web application.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction HTML
- HTML Basics
- HTML Elements
- HTML5 Semantic
- HTML Attributes
- HTML Headings
- HTML Paragraph
- HTML Styles
- HTML Formatting
- HTML Quotations
- HTML Computer Code
- HTML Comments & Colours
- HTML CSS, Links and Images
- HTML Lists
- HTML Blocks
- HTML Classes
- HTML Layout
- HTML Responsive
- HTML iframes
- HTML JavaScript
- HTML Head



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1.FRONT-END COURSE MODULE: Cascading Style Sheet (CSS)

Module Objectives:

- Building Strong expertise to develop front end application using CSS3
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:

This course provides you hands-on experience and exposure to developing CSS3 based web application. This course builds strong foundation on CS33 which will help developer to use CSS3 concepts for building responsive web application

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction CSS3
- CSS3 Syntax
- CSS3 How To
- CSS3 Colours
- CSS3 Backgrounds
- CSS3 Borders
- CSS Padding
- CSS Height/Width
- CSS3 Gradients
- CSS3 Shadows
- CSS3 Text
- CSS3 Fonts
- CSS3 2D Transforms
- CSS3 3D Transforms
- CSS Links
- CSS Lists
- CSS Tables
- CSS Box Model
- CSS Outline
- CSS Display
- CSS Max-width
- CSS Position
- CSS Float
- CSS Inline-block
- CSS Align
- CSS Combinators
- CSS Pseudo-class
- CSS Pseudo-element



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- CSS Navigation Bar
- CSS Dropdowns
- CSS Tooltips
- CSS3 Images
- CSS Attr Selectors
- CSS Forms
- CSS Counters
- CSS3 Animations
- CSS3 Buttons
- CSS3 Pagination
- CSS3 Multiple Columns
- CSS3 User Interface
- CSS3 Box Sizing
- CSS3 Filters
- CSS3 Media Queries.
- CSS3 Responsive

1.FRONT-END COURSE MODULE: Bootstrap

Module Objectives:

- To become proficient in Bootstrap concepts
- To develop a web pages based on Bootstrap

Overview:

This course is targeted for fresh engineers or professional who want to build competency in the Bootstrap Based web development.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to Bootstrap
- Bootstrap Basics
- Bootstrap Grids
- Bootstrap Themes
- Bootstrap CSS
- Bootstrap JS



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1.FRONT-END COURSE MODULE: Javascript

Module Objectives:

- Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:

This course provides you hands-on experience and exposure to develop JavaScript based web application. This course builds strong foundation of JavaScript which will help developer to apply JavaScript concepts for responsive web frontend and backend development.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to JavaScript
- Java Script Language Basics
- JavaScript Objects
- JavaScript Scope
- JavaScript Events
- JavaScript Strings
- JavaScript Numbers
- JavaScript Math
- JavaScript Arrays
- JavaScript Boolean
- JavaScript Comparisons
- JavaScript Conditions
- JavaScript Switch
- JavaScript Loops
- JavaScript Type Conversion
- JavaScript RegExp
- JavaScript Errors
- JavaScript Debugging
- JavaScript Hoisting
- JavaScript Strict Mode
- JavaScript Functions
- JavaScript Objects
- JavaScript Forms
- JavaScript HTML DOM
- JavaScript BOM



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1.FRONT-END COURSE MODULE: jQuery

Module Objectives:

- Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:

This course provides you hands-on experience and exposure to develop jQuery Mobile based responsive web application. It builds strong foundation of jQuery which will help developer to apply concepts for responsive web frontend development.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to jQuery
- jQuery Syntax
- jQuery Selectors
- jQuery Events
- jQuery Effects
- jQuery HTML
- jQuery Traversing
- jQuery AJAX & Misc



2. FOUNDATION PARADIGM:

Module Objectives:

- To become proficient in OOPS, Design Patterns and Data Modelling concepts
- At the end of the course candidates will learn the concepts and their practical applications

Overview:

This course is targeted for fresh engineers or professional who want to build competency in the Object-Oriented Programming. We focus on understanding OOPs concepts and its applications.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

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Detailed Course Contents:

- OOPs
- Design Patterns
- Object Oriented Design
- JSON
- DOM
- AJAX

3. 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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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

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

4. ReactJS (Building Web App using ReactJS)

Module Objectives:

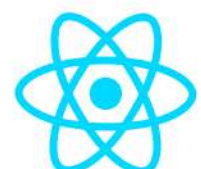
- ReactJS basically is an open-source JavaScript library which is used for building user interfaces specifically for single page applications.
- It's used for handling view layer for web and mobile apps.

Overview:

ReactJS is JavaScript library used for building reusable UI components. According to React official documentation, following is the definition. It encourages the creation of reusable UI components, which present data that changes over time. React abstracts away the DOM from you, offering a simpler programming model and better performance. React can also render on the server using Node, and it can power native apps using React Native. React implements one-way reactive data flow, which reduces the boilerplate and is easier to reason about than traditional data binding.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome



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Detailed Course Contents:

- 1. Introduction to ReactJS and Basic Concepts**
 - Setup
 - Your First React App
 - Custom Configs
 - Var, let, const & Objects
 - This keyword & Binding this
 - Arrow function and this
 - Object Destructuring
 - Spread Operator
- 2. Introduction to JSX**
- 3. OOP (Object Oriented Programming)**
 - Classes & Objects
 - Inheritance & Modules
 - Named and Default Exports
- 4. Components**
 - Your First React Component
 - Embedding Expressions & Setting Attributes
 - Rendering Classes Dynamically
 - Conditional Rendering
 - Handling and Binding Events
 - Build an App (Exercise)
- 5. Composing Components**
 - Passing Data to Components
 - Props vs State
 - Life Cycle Hooks
- 6. Forms**
 - Controlled vs Uncontrolled Components
 - Does React control your form field?
 - When does React find out about changes to your form field
 - Form Field Types
 - Controlling the text fields
 - Getting Data Out of Form
 - Working with Form data in Test
- 7. Routing**
 - Typing Components to URL
 - Passing Parameters via URL's
 - React Router
 - Other Router
- 8. Calling Backend Services**
- 9. Authentication and Authorization**
- 10. Testing your React App**

5. MEAN STACK COURSE MODULE: **Mongo DB**

Module Objectives:

- Building strong expertise in Document Oriented Non-Relational Database Management System
- Implement frontend and backend scenarios to read, write and update data stored in MongoDB

Overview:

This course provides you hands-on experience and exposure to implement frontend and backend scenarios to read, write and update data using MongoDB. This course builds strong foundation for web application development based on client-server architecture.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to MongoDB & MongoDB Environment
- MongoDB Create Database



5. MEAN STACK COURSE MODULE: **Angular 7**

Module Objectives:

- Building Strong expertise to develop front end application using Angular 7
- Implement MVC and responsive design to scale well across PC, tablet and Mobile Phone

Overview:

This course provides you strong foundation on Angular7 driven by hands-on experience and exposure to develop responsive web application using MVC design pattern. During the course, you should be able to build strong background about Angular7 architecture, usage of services and applying Angular7 concept to develop frontend application.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to Angular7
- Angular7 Expressions & Angular7 Modules
- Angular7 Data Binding & AngularJS Scopes
- Angular7 Directives & Events
- Angular7 Controllers
- Angular7 Filters & AngularJS Services
- Angular7 HTTP
- Angular7 Tables & Angular7 Select
- Fetching Data from MySQL
- Angular7 Validation & Angular7 API
- Angular7 Animations & Angular7 i18n and i10n



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Overview:

This course provides you strong foundation on AngularJS driven by hands-on experience and exposure to develop responsive web application using MVC design pattern. During the course, you should be able to builds strong background about AngularJS architecture, usage of services and applying AngularJS concept to develop frontend application.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to AngularJS
- AngularJS Expressions
- AngularJS Modules
- AngularJS Data Binding & AngularJS Scopes
- AngularJS Directives & Events
- AngularJS Controllers
- AngularJS Filters & AngularJS Services
- AngularJS HTTP
- AngularJS Tables & AngularJS Select
- Fetching Data from MySQL
- AngularJS Validation & AngularJS API
- AngularJS Animations & AngularJS i18n and i10n

5. MEAN STACK COURSE MODULE: Node.js

Module Objectives:

- Building Strong expertise on Node.js core to develop web application
- Implement web application and deployment

Overview:

This course provides you strong foundation on Node.js driven by hands-on experience and exposure to develop NodeJS based application and deployment. During the course you should be able to builds strong background about Node.js architecture, usage of services and applying Node.js concept to develop frontend application supported by backend web servers.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Getting started & Node Core
- Node Modules & File System
- Debugger, Automation and Deployment



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6. DATA EXCHANGE COURSE MODULE: Hyper Text Transfer Protocol (HTTP)

Module Objectives:

- Developing single page application using Express Framework

Overview:

This course provides you hands-on experience and exposure to developing web application using HTTP. This course builds strong foundation of HTTP based request and response scenarios which will help developer to build efficient web applications.

Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

Detailed Course Contents:

- Introduction to HTTP
- HTTP Parameters
- HTTP Messages
- HTTP Request
- HTTP Response
- HTTP Methods
- HTTP Status Code
- HTTP Header Fields
- Registration
- HTTP Authentication
- HTTP Caching
- HTTP URL Encoding
- HTTP Security



http://

>> Participants, who will complete the course will get PNY Trainings Certificate and referred in relevant industry for jobs and internships.

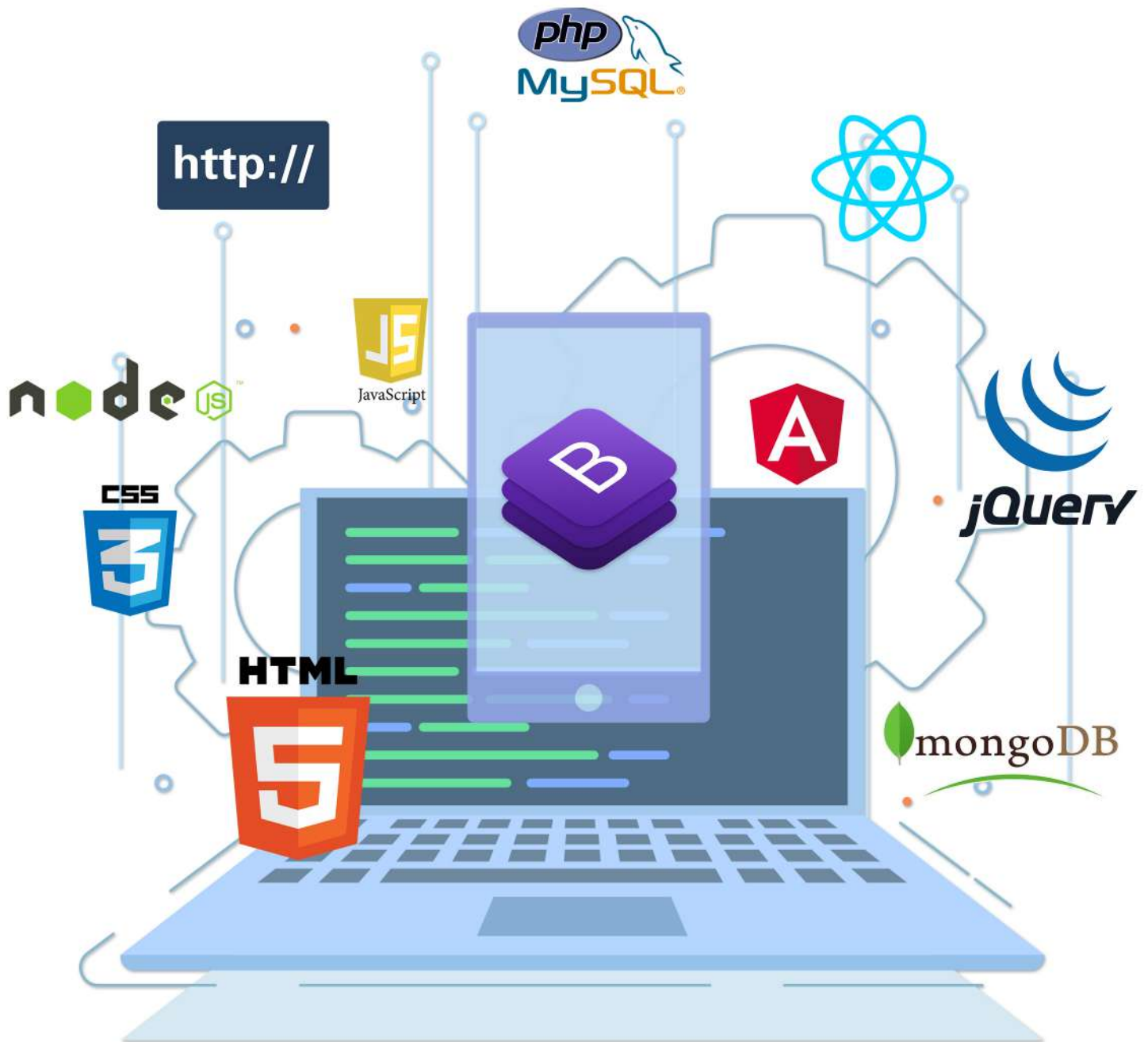
* Plan of 3 Lectures of 2 Hours in a Week

* Total Credit Hrs: 144

Course Schedule

Module	Languages	Duration	Lecture	Assignments Project	Full Projects	Exam
Front-End	Html	1 Week	3 Lectures	3	1	
	CSS	2 Weeks	6 Lectures	4		
	JS	2 Weeks	6 Lectures	5	2	
	Bootstrap	1 Week	2 Lectures	2		
	Jquery	1 Week	3 Lectures	2		
						1
Back-End	MySQL, DB, Queries	1 Week	1 Lectures	3		
	Php CRUD	2 Weeks	5 Lectures	3		
	Php MVC (Laravel)	3 Weeks	10 Lectures	3	1	
	Php Plugins	1 Week	1 Lecture	3	1	
						1
DB Advanced Tools	Details of all structure	1 Week	4 Lectures	6	2	
						1
React JS		3 Weeks	10 Lectures			
Front-Back End	Node.js	3 Weeks	9 Lectures	12	2	
						1
MVC	Angular 7, Vue.js Express	4 Weeks	14 Lectures	9	2	
						1
Build Mobile app	Ionic	1 Week	2 Lectures	3	1	
						1
Server Tools	Github	1 Week	1 Lecture	3	1	
						1
Project Discussions	Final Product	1 Week	2 Lectures	6	1	
						1

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I.T TOWER BRANCH LAHORE ADDRESS : OFFICE # 4, FIRST FLOOR I.T TOWER GULBERG 3 ADJACENT CHEN ONE (BACK SIDE OF HAFEEZ CENTRE) LAHORE, PAKISTAN