***Module 2***

1. **WordPress**: WordPress is an online, open source website creation tool written in PHP. But in non-geek speak, it’s probably the easiest and most powerful blogging and website content management system (or CMS) in existence today.
2. **PHP**: PHP (recursive acronym for *PHP: Hypertext Preprocessor*) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.
3. **Microsoft Dynamics CRM**: is a customer relationship managementsoftware package developed by Microsoft. The product focuses mainly on Sales, Marketing, and Service (help desk) sectors, but Microsoft has been marketing Dynamics CRM as a CRM platform and has been encouraging partners to use its proprietary (.NET based) framework to customize it. It is part of the Microsoft Dynamics family of business applications. Dynamics CRM is a server-client application, which, like Microsoft SharePoint, is primarily an IIS-based web application which also supports extensive web servicesinterfaces. Clients access Dynamics CRM either by using a browser or by a thick client plug-in to Microsoft Outlook.
4. **ClickDimensions**: With essential marketing tools like email marketing, campaign automation, web intelligence, surveys, web forms and landing pages, social marketing and more, ClickDimensions helps organizations that use Microsoft Dynamics 365 attract more leads, close more sales and more effectively engage customers. And you can do it all from the comfort of your Dynamics 365 environment, so you can reach their world without leaving yours.
5. **NoSQL**:NoSQL databases are purpose-built for specific data models and have flexible schemas for building modern applications. NoSQL databases are widely recognized for their ease of development, functionality, and performance at scale. They use a variety of data models, including document, graph, key-value, in-memory, and search. NoSQL databases use a variety of data models for accessing and managing data, such as document, graph, key-value, in-memory, and search. These types of databases are optimized specifically for applications that require large data volume, low latency, and flexible data models, which are achieved by relaxing some of the data consistency restrictions of other databases.
6. **DynamoDB**: Amazon DynamoDB is a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability. DynamoDB lets you offload the administrative burdens of operating and scaling a distributed database, so that you don't have to worry about hardware provisioning, setup and configuration, replication, software patching, or cluster scaling. Also, DynamoDB offers encryption at rest, which eliminates the operational burden and complexity involved in protecting sensitive data. With DynamoDB, you can create database tables that can store and retrieve any amount of data, and serve any level of request traffic. You can scale up or scale down your tables' throughput capacity without downtime or performance degradation, and use the AWS Management Console to monitor resource utilization and performance metrics.
7. **Git**: is a version control system for tracking changes in computer files and coordinating work on those files among multiple people. It is primarily used for source code management in software development, but it can be used to keep track of changes in any set of files. As a distributed revision control system, it is aimed at speed, data integrity, and support for distributed, non-linear workflows.
8. **REST**: REST, or REpresentational State Transfer, is an architectural style for providing standards between computer systems on the web, making it easier for systems to communicate with each other. REST-compliant systems, often called RESTful systems, are characterized by how they are stateless and separate the concerns of client and server.
9. **Foundation**: is a responsive front-end framework. Foundation provides a responsive grid and HTML and CSSUI components, templates, and code snippets, including typography, forms, buttons, navigation and other interface elements, as well as optional functionality provided by JavaScript extensions. Foundation is maintained by ZURB and is an open source project.
10. **AngularJS**: AngularJS is a structural framework for dynamic web apps. It lets you use HTML as your template language and lets you extend HTML's syntax to express your application's components clearly and succinctly. AngularJS's data binding and dependency injection eliminate much of the code you would otherwise have to write. And it all happens within the browser, making it an ideal partner with any server technology. AngularJS is what HTML would have been, had it been designed for applications. HTML is a great declarative language for static documents. It does not contain much in the way of creating applications, and as a result building web applications is an exercise in *what do I have to do to trick the browser into doing what I want?*

Mercurial; Responsive Design; Marketo; Ember; Django; .Net; React; JSON; XML; MQTT

SASS; Gulp; Grunt; Foundation, *et cetera…*

***Notes from Supplemental Videos***

Web development usually refers to activities related to website functionalities development. There are three major components:

A: Client (frontend)

B: Server (backend)

C: Database

1. Client/frontend is the local computer, device & browser the user interacts with to access the website. The website should function the same way on all browsers.
2. Server/backend is the remote computer being run on the ‘other side’ and is responsible for site code generation and database handling.
3. Database is the information that is generated or used within the website. E.g., all account information for a logged-in user is stored in the database.

Web development is this entire process listed above.

**Web development roles:**

1. **Web designer**: website appearance (often use Adope Photoshop and Illustrator) and usability. Build web prototypes (advanced).
2. **Frontend developer**: The glue that hold web designers and backend developers together. Deal with client-side programming and apply web design. Main tools are HTML, CSS, and JavaScript.
3. **Backend developer**: developer server-side logic, manage database connection, design APIs, handle security and authorization. Main tools are Ruby, NodeJS, JavaScript, Python, etc. Also deal with databases, MySQL, etc.
4. **Full stack developer**: a one-man specialist that can work on both client and server side, and sometimes even a design. Mastery over different layers is in high demand.

A **web developer is responsible for** building and maintaining websites. While code development is the biggest part of a developer’s job, there are other crucial tasks that need to be done, such as: analysis (talking with client, gathering functional and non-functional requirements); code review (before new code is added to a codebase, it usually undergoes a review process; this is where other developers go through your code, review it, and make suggestions for small fixes); mentoring (share your knowledge with others, train junior developers, paired programming, etc.); maintenance (solving random bugs and implementing small changes for an already-working projet); meetings (spend lots of time meeting and talking to discuss new features with clients, status meetings with code teams, previous day’s accomplishments and what’s next).

**Why pay a web developer over using a template-based website service, such as Squarespace?**

—These template-based services result in cookie-cutter websites. Hand-coded websites by a web developer results in higher functionality, where you can add not just Google Analytics and AdSense code, but also other greater functionality and design. Real businesses need web development for tailor-made websites; these represent and serve the business better.

How do you stand out as a new/entry web developer?

—Connections. Relationships. Networking.

—Build a portfolio.