

Draft Version

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WEB DEVELOPER SKILLS FOR SOCIAL MEDIA AGE

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Preface, Acknowledgements and Introduction

I am writing this outline to enable young web developers create a learning path for themselves and measure their own progress. My goal is not to help them become great web application developers, but also know their current level of expertise and evaluate their value to negotiate their compensation with their potential employers.

This is a small paper and you will find some empty space at the end of each topic. This will help you take notes if you make a paper copy of this outline paper.

Not a Tutorial

Note that this is not a tutorial on web technologies. It is only an outline of what technologies you need to know to become a great web developer.

Acknowledgements

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Questions, Comments, Criticism, Appreciations

Please contact the Author, Rafeeq Ur Rehman, at rafeeq.rehman@gmail.com for any questions or comments or provide any feedback that can be helpful in the next version of this document. All types of critique are welcomed, as long as it is short!

Web Development Areas of Expertise

Web development has become more and more sophisticated. New technologies and techniques to integrate web applications are emerging rapidly. I have divided the web development skills into three different levels.

1.1 Level 1 Expertise

Level 1 expertise is the base minimum expertise level to work in web development. This includes the following list.

- HTML5
- JavaScript
- Database and SQL queries
- PHP and/or other development languages
- Cascading Style Sheet
- Web Browsers
- Blogging Platforms (Wordpress, Drupal)
- Version control system

1.2 Level 2 Expertise

Level 2 expertises distinguish an entry-level web developer from an experienced web developer. These are listed below

- Running Web Servers, knowledge of commonly used web servers like Apache, Microsoft SQL server

- Security, Authentication
- Operating Systems
- Social Media Integration (API, Facebook, Twitter, LinkedIn)
- Design
- Messaging
- Analytics, at least using Google Analytics
- Graphic API
- AJAX frameworks like jQuery
- JSON
- XML and XML web services
- RESTful web services
- Geo locations

1.3 Level 3 Expertise

Level 3 expertises will make you an architect of web applications and technologies.

- Networking
- Debugging and sniffing tools
- Performance
- Enterprise applications
- Hadoop, distributed applications
- Laws and regulations related to Email/SPAM, Privacy
- Encryption
- Mobile devices
- Load balancing, data replication, failsafe applications development
- Designing and Providing APIs for integration
- Knowing multiple web application development frameworks and choosing appropriate framework for specific applications. This includes starting from PHP frameworks to J2EE, .Net, Ruby/Rails, etc.
- Storage technologies

Level One Web Developer

Level 1 web developers are entry-level developers who can create small web applications. The minimum skill levels are listed in the following sections.

2.1 Creating Development Environment

You can create a basic web development environment in one of the following way:

- If you are running Linux, most probably a web server, database server, and PHP already exist on your machine.
- If you are using Microsoft Windows, download and install WAMP from <http://www.wampserver.com/en/>
- If you are running Mac, download and install MAMP from <http://www.mamp.info/>

This will help you overcome a lot of trouble in setting up the development environment on your laptop/desktop and you can skip installation steps in most of the tutorials mentioned below.

2.2 HTML5

HTML or Hyper Text Markup Language is the basis of all web pages. In addition to common HTML tags, web developers must know and use the following:

- Use proper indentations in HTML code
- General HTML tags and attributes
- HTML frames
- HTML input types
- HTML Layouts
- Embedding videos and audio
- 2D and 3D graphics
- Local storage
- Local databases

For more learning about HTML 5, please refer to following links:

- <http://www.w3schools.com/html/>
- http://www.w3schools.com/html/html_layout.asp
- <http://www.w3schools.com/html5/default.asp>
- <http://en.wikipedia.org/wiki/HTML5>

2.3 JavaScript

JavaScript is mandatory for any web site development. For good use of JavaScript in web site, learn at least the following:

- Object Oriented programming concepts
- DOM or Document Object Model
- JavaScript language, data types, loops, events, etc.
- Some information about regular expressions

Use the following links to learn JavaScript:

- <http://www.w3schools.com/js/default.asp>
- <http://en.wikipedia.org/wiki/JavaScript>

2.4 Database and SQL

In this area, learn at least the following:

- At least one database like MySQL, knowing how databases work and what relational databases are.
- Database tables, relations, views, triggers, integrity, etc.
- Connecting to databases.
- Running SQL queries and understanding basic CRUD (Create, Retrieve, Update, Delete) operations in data stored in databases.

Use the following links to learn basic SQL and MySQL

- <http://www.w3schools.com/sql/default.asp>
- <http://dev.mysql.com/doc/refman/5.6/en/tutorial.html>
- http://dev.mysql.com/tech-resources/articles/mysql_intro.html

2.5 PHP or Other Web Development Languages

Learn PHP or at least one other web development language. PHP is probably is the simplest one to start.

Use the following tutorials.

- <http://php.net/manual/en/tutorial.php>
- <http://www.w3schools.com/php/>

2.6 Cascading Style Sheet

Cascading Style Sheet or CSS is used to create styles for HTML document. No serious web site works without CSS or use of styles. Use the following link to learn about CSS.

- <http://www.w3schools.com/css/>
- <http://www.csstutorial.net/>
- http://en.wikipedia.org/wiki/Cascading_Style_Sheets

2.7 Web Browsers

Different web browsers have varying capabilities and respond differently to HTML and CSS styles. Knowing the capabilities of target browsers and using CSS or other methods to make sure your web page displays correctly in each browser is imperative for web development.

2.8 Blogging Platforms (Wordpress, Drupal)

For simple web site, it saves a lot of time to use blogging software and templates instead of creating everything from scratch. I would highly suggest learning at least two of the commonly used software platforms for blogging: Wordpress and Drupal.

- Wordpress – www.wordpress.org
- Drupal - <http://drupal.org/start>

2.9 Version Control System

The web developers also need to know a version control system. Subversion (SVN) and CVS are very common. A version control system enables a team of developers to work on the same project and make updates to shared source code. For a quick overview, go to following links:

<http://aymanh.com/subversion-a-quick-tutorial>

Using a graphic tool makes it easy to use SVN. Tortoise is a very popular tool. To download Tortoise, use the following link. It is available for Linux, Windows, and Mac.

<http://tortoisesvn.net/>