3-Tier Web Architecture

3 Tier Web Architecture is that unique system of developing web database application which works around the 3 tier model, comprising of database tier at the bottom, the application tier in the middle and the client tier at the top. This comprehensive 3 tier architecture module is the framework for most Web Applications on the Internet. This system helps to separate the Business Logic from the Application, Data Storage and database. Our team of experienced and highly efficient technical staff develop the most unique and exclusive Web Application Development in the web 3tier architecture to enhance our clients businesses.

The three tier Web Architecture is designed to provide a greater degree of flexibility and increased security that can be designed for each service at each level. This unique system of framework for web application development with the 3tier web architecture also ensures that there is increased performance as the task is shared between servers. Web 3-Tier architecture is a connection and composition of the three links that facilitates the smooth functioning of the website.

The composition of three tier web architecture

The first tier in this 3tier web architecture framework for efficient web application development is the client tier. This tier includes usually is a web hosting that includes the HTML recourses that has the necessary user interfaces to enhances the client's experience, as it is the computer that requests the resources, equipped with the most attractive user interface in adherence to the client's taste depending on the industry of this business website. The first tier in the three tier system of architecture comprises of web browsers for HTTP clients that efficiently interacts and co-ordinates with the Web servers using the most convenient and standardised protocols. In this 3tier web architecture web application development module, the client is very often referred to as the tier since very little application logic resides in this particular tier. This tier also has the necessary built-in feature system which efficiently has more rich-features than the essential display html page. This tier essentially interacts with the client by displaying data of various kinds. Only few of the application logic in form of java script are essentially executed by browser, nevertheless having limited feature and usage. The sole feature benefit and technical advantage of the 3tier architecture is that it does not have to depend on any operating platform and neither on any added or additional software.

The second or the middle tier comprises of the most magnificent and the most important part of the application logic. It essentially plays the role of bringing together the three layers of the three tier web architecture. While technically processing the various inputs and selections received by the clients it plays the role of interaction with the vast database present in the third tier. The middle or the second tier in the three tier web architecture contains the web server, the web scripting language and the scripting language engine. The Web server most often processes the HTTP requests and formulates reciprocation in the scripting language running on the scripting engine. This tier has the technical efficiency to deal and comprehend the dynamic content and built-in libraries that accentuates the faster access of the database to extract results.

The third tier of the database tier in the 3 tier system is made up of the DBMS in other words the database management system and the database. This complex application layer consists of the application logic while exchanging data in between tiers in the three tier Web Application, making the top tier mostly a thin client or a browser. The first tier is therefore the data server, providing clients an application server with all the necessary data that it may require in order to function.

We adapt this three-tier architecture to develop feature-rich and highly efficient Website Application Development solution services to our global clients.

What Skills Should a Well-Qualified Full-Stack Web Developer Have?

Here is a list of a minimum skill set for a well-experienced full-stack web developer:

required skills for a full stack developer

Front-end & back-end. The widely used front-end technologies include HTML5, CSS3, and JavaScript and such libraries like jQuery, React Js, Angular, etc

A bunch of programming languages. The most popular server-side programming languages are Java, Python, and Ruby, but there are many more other ones used for web app development

Strong knowledge of a variety of databases. Such databases like MySQL, SQL Server, Oracle are commonly used by full-stack software developers.

Basic UI/UX experience. If a full stack developer has experience with building UI/UX design, you can be sure that you see a broad specialist. At least, a full stack developer should be familiar with basic principles of prototype and UI/UX design

Good server understanding. Experience with Linux OS is useful for maintaining virtual servers such as Apache or Nginx

Experience with API (REST & SOAP). API or web services knowledge is highly desirable for full stack specialists because it broadens the possibilities for what is full stack programming used.

Besides all mentioned skills beneficial for full stack web programming, let’s look at the front-end and back-end part more carefully. If to talk about the real front-end knowledge stated in a full stack engineer resume, the following are meant:

HTML/CSS

jQuery

SCSS

Javascript

React (or Angular, Vue JS, Redux etc)

React Router (the latest is v4, for Single Page Applications)

Babel (for converting ES6 code to ES5)

Webpack

Canvas/WebGL

Git/Github/GitLab

Of course, the more technologies, platforms, and tools the programmer knows, the higher full stack developer salary is. Let’s have a look at back-end technologies which are equally important:

NodeJS, ExpressJS

GraphQL

MongoDB/Mongoose

Socket.IO

PassportJS

The most popular tasks for a full stack web developer include:

Compose the overall architecture based on the client’s technical specification

Manage all stages of the project development

Develop back-end part in Python, PHP, Java, etc

Complete HTML, JavaScript parts related to front-end

Team management and communication with the client

Test and improve the product based on test results and client’s feedback

Complete quality unit tests per request

Evaluate, develop, and debug database-based queries, data structures, and other algorithms

Include security protection

Monitor the performance of the launched web app

Troubleshoot the web app within the shortest time

Looking at all these technologies listed, you probably don’t wonder anymore why there are not many full stack developers in the market, how much time and efforts it takes to become a full stack programmer, and why full stack engineer salary rates are bigger than front-end or back-end specialists gain.