

Development of a web application for publishing it startups

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Abstract. The increase of use of web applications has substantially changed the use of internet services and how the people access to them. The introduction of the World Wide Web has revolutionized the computer and the internet. The web provides an easy and cost-effective way of retrieving, searching and sharing information and a more flexible way of communication. It has been necessary for a large number of companies to adapt their services to be used through the browser.

Key words: web application, World Wide Web, IT startup, investor, web- service, IT sphere, market.

INTRODUCTION

Over the last few years, the advance of the internet along with the technology has been such that a large number of actions have been completely absorbed by the use of web applications, either from a computer or from a mobile device with internet access. From the instant communication between two people, to the purchase of a product or to make our business known through the internet. Every day new applications are coming out, increasingly easier and more comfortable, which make it possible for us to perform daily tasks with just one click.

Undoubtedly, the advantages outweigh the disadvantages. This type of web applications has helped to improve many aspects such as access to information, storage of data safely or to purchase immediately, easily and from anywhere.

The aim of the current paper is to provide a description about the development of a web application that consists in a publisher of IT startups, that allows to authors, owners of IT startups to show their ideas to their location, as is already known a startup is a young company that is just beginning to develop, are usually small and initially financed and operated by a handful of founders or one individual. These companies offer a product or service that is not currently being offered elsewhere in the market, or that the founders believe is being offered in an inferior manner.

The proposed approach will be useful to create the direct connection of that young company with growing desires with investors that always are looking for new e innovative projects, and to get them onboard to the IT

sphere that is growing every day more. Revenue will be obtained depending of the development cost of each IT startup and voluntary contributions.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

The Web emerged in 1994, based on a model of individually-authored documents loosely tied together by hyperlinks. Since then, those Web "pages" have evolved into Web sites and Web Apps, with smaller and smaller bits of content, generated by more and more users or databases, with increasing amounts of interactivity. The Web has become a swarm of small stuff, changing very quickly.

Analyzing issues related to web applications development has been evaluated such scientific as an important research by the international community W3C the World Wide Web Consortium which work to develop Web standards - "Web Publications for the Open Web Platform"[1], as well as research by H.-W. Gellersen, M. Gaedke – "Object-oriented Web application development" [2], Musa Bala Shuaibu, Ruqayyat Ahmad Ibrahim - "Web application development model with security concern in the entire life-cycle"[3], Shipra Ravi Kumar, Ravi Sharma, Keshav Gupta - "Strategies for web application development methodologies"[4], B. as well books, Deshpande, Y - "Web engineering. Journal of Web Engineering"[5], Daniel M. Brandon - "Software Engineering for Modern Web Applications"[6], Allamaraju S. - "RESTful Web Services Cookbook"[7], Kyle Prinslod - "Web Development & Beyond"[8], Jason Lengstorf- "Realtime WebApps"[9].

In each of the given below scientific articles, are only an outline of thoughts that only partially reveals the issues of developing Web applications development, since any application is developed provides the project with unique features. However, after studying the information, the necessary knowledge was obtained for problem setting and project development [10-14].

FORMULATION OF THE PROBLEM

Building a web application isn't a one-dimensional exercise. Modern web developers will be required to leverage a number of techniques to build apps that meet the needs of their users and poorly developed web-application have a high probability of low performance and/or failure, the cost of bad design, shabby development, poor performance, and or lack of content management has many serious consequences.

The requirement to use multiple connections for bidirectional communications and cross-browser implementation differences isn't the only problem with HTTP-based solutions. Browsers also restricted the destination of HTTP request from a web page and the number of connections that could be established [9, 13].

The complexity of Web-based applications has also grown significantly — from information dissemination (consisting of simple text and images to image maps, forms, common gateway interface [CGI], applets, scripts, and style sheets) to online transactions, enterprise-wide planning and scheduling systems, Web-based collaborative work environments, and now multilingual Web sites, Web services and mobile Web applications. [5, 15].

The web application will involve forms of transmitting private information that needs to remain secure. Although, the knowledge of how to develop a secure web application is known, the major concern is the insufficiency of the right developmental model and practice. The use of inappropriate methodology in developing a web application can seriously undermine publication's confidentiality and integrity.

FORMULATION THE OBJECTIVE

The internet gave us the ability to share information with global audiences, but it could still take a long time for the information to be discovered, and we relied on things like email and forums to spread the word. Google changed all the by making data much more discoverable via search.

With web apps, the focus shifts away from the server to the client. The client has to do much more work; it retrieves and loads content dynamically, it changes the user interface (UI) based on user feedback, and the UI is presented in a way that we would be traditionally associated with a desktop application. There's much less focus on pages reloading and the concept of a page in general. Content also becomes much less text-based, and we start to achieve much more visually appealing and interactive representations of data within a web application.

The objective of the current article is to describe the basic principles and means of developing a different from traditional software, information system, or computer application development, that is a web-application or web-based application for publishing IT startups on the internet.

THE MAIN RESULTS OF THE RESEARCH

The main fact of developing a Web Application for publishing IT startups is to post them online creating a web publication, that is a collection of one or more constituent resources, organized together in a uniquely identifiable that may be presented using the web standards.

Substantiating the topics of the project, and making comparisons with analogues, will obtain a good acceptance level from the audience. The obtained information in the research reveals a high competitiveness in the market conforming with the general requirements [16].

The quality requirements of FURPS give high praise to the project implementation. The focus of the project is based on creating a publication of IT startups in a SPA(Single Page Application), providing to the visitor the necessary tools to make the web application easy and accessible, so the visitor feels the interaction with the web application friendly not only because of its visual appeal but also because of the reaction speed and the content option presented, in order to capture the visitor attention, captive him, make of him a frequent visitor [17].

As a solution for the response time for a certain request and to reduce the rendering of the web application, was considered to use one of the most popular framework of JavaScript, and it is React. With React, by conceptually re-rendering everything whenever anything changes, not only do you have code that is safe by default, it is also less work as you only need to write the creation path: updates are taken care of for you. React provides a great way to solve browser differences. React is:

- Declarative - makes it painless to create interactive UIs. Design simple views for each state in your application and React will efficiently update and render just the right components when your data changes, predictable and easier to debug.
- Component-Based - Build encapsulated components that manage their own state, then compose them to make complex UIs. Since component logic is written in JavaScript instead of templates, you can easily pass rich data through your app and keep state out of the DOM.

A web development process outlines the various steps and activities of web application development. To avoid the difficulty of the development of the web application, we will follow the following steps for the development (Fig. 1).

This process will assist us in understanding the context in which the web application will be deployed and used, helps in capturing the requirements, enables integration, of the know-how from different disciplines, facilitates the communication among various members involved in the development process, supports continuous evolution and maintenance, facilities easier management of the information content and helps in successfully managing the complexity and diversity of the development process.[18]

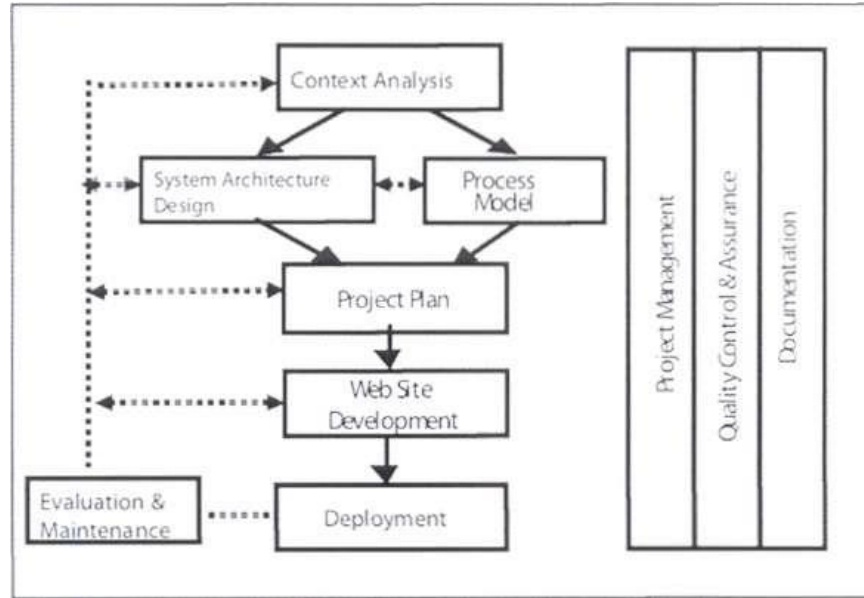


Fig. 1. Web application development process.

General requirements:

- Uniform look and feel across all the application components that can easily be modified - creation of components with modular styles
- Consistency of information that may appear in different places of the application - storing information in a single place (in the database or in the html file) - without duplicating of information in different places or databases – and retrieving the required information for presenting where and when needed. Ease of information update and maintenance - provision of a back-end system to edit information in a data repository, could have Web interface for easy access from anywhere.

Ability to add new components easily – Dynamic generation of navigational links, rather than predetermined static navigational links. Decentralized system administration – provision of a multi-user login system to access back-end systems and in conclusion of a user administration system, that can be assign specific functions and data sets to content managers and other developers/administrators.

Mechanisms for quality control and assessing the relevance of information – inclusion of metadata, use of a web robot for gathering salient information, processing the information, gathered and taking appropriate action(s) for ensuring quality or relevance of information presented. Increased probability of being found through search engines using meta tags registering with search engines.[19]

Mobility – the web application has the ability ship from one operative system to another. Scalability – the web application has the ability to receive, process and send requests to ensure a comfortable work with a massive quantity of users. User interaction – offers a convenient and understandable interface with the availability of multi-user settings.

CONCLUSIONS

First of all, the research revealed that the current project will have a place in the market, as there are not similar analogues at the moment.

The Web Application is more focused in help IT startup authors to get support of investors, because startups have a high failure rate, and the would-be investors should consider not just the idea, but the management team's experience. As we now place greater emphasis on the performance, correctness and availability of Web Applications, the development and maintenance process will assume greater significance. [20, 21].

Was determined the critical points which should not have a place in the development process of the Web Application.

One of the most advantages of the development of the Web Application is its deployment geological area, because the information technology sector in the eastern European countries seem to be booming.

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