

WEB SYSTEM FOR PROCESS MANAGEMENT FOCUSED ADVERTISING BUSINESS WITH LOW PRODUCTIVITY IN THE CITY OF IBARRA

José Gabriel Guerra Guzmán

*Carrera de Ingeniería en Sistemas Computacionales,
Universidad Técnica del Norte*

Av. 17 de Julio 5-21 y Gral. José María Córdova, Ibarra, Imbabura, Ecuador

e-mail: joseg-1993@hotmail.com

Abstract. *The Publicity on the Internet can be somewhat misleading because multiple cyber thefts that occur, as well the lack seriousness and responsibility to make announcements through the internet and social networks represents insecurity, these issues are raised by the development of an advertising web system focused businesses with low productivity in order to take advantage of different technologies offered by the web to show information attractive and safe way for the customer.*

communication, because it is considered an effective distribution system information. Well as the benefits offered to commercial advertising are endless, such as lack of geographical distances or operating hours.

Internet advertising allows customers to find products and services of all kinds. In addition, the use of this tool helps marketers to have direct contact with consumers, this is considered by some actors (Benjamin and Wingand, 1995) as a process of eliminating middlemen and reducing the length of the channels distribution. [2]

Keywords

Publicity, advertising web system, advertising marketing, XP Methodology, Yii Framework

1. Introduction

Internet provides a wealth of information on any subject, can incorporate multimedia elements and is accessible to all. This feature is effective when advertising online, it is a tool that generates customer information in real time. By using this type of advertising the benefits of digitization provided by this means, reversing the need for tangible materials that degrade the environment is used.[1]

Internet advertising represents another type of marketing, this has been an important development, especially in the field of

The main objective of the advertising web system is to provide entrepreneurs small or large-scale aid to improve low productivity indices in the labor market, simplifying mostly unnecessary expenses and turning them into productive investment for the entity. Therefore, this thesis presents an application to serve as a working tool and guidance for customers location, providing access to efficient advertising, using new technologies.

Technological innovation makes it possible to build new tools that provide solutions to various problems facing the world's population.

1.1. General Objective

Develop a web system for managing processes focused advertising businesses with low

productivity in the city of Ibarra, using the Yii framework tool.

1.2. Specific objectives

Analyze and define advertising management processes in businesses with low productivity.

XP Apply the methodology with all stages in the development of the system.

Developing web system and an advertising model using georeferencing tools.

Validate the quality of software in use by applying the ISO / IEC 25022 standard.

1.3. Scope

This project aims to develop an advertising web system for disseminating information to their respective commercial advertising of products or services they arise.

The project consists of a web system and will be adaptable for mobile phones, will have several modules are:

- *Authentication Module*

This functionality module is limited functionality that has the system according to the role previously assigned to the user.

- *Registration module for enterprises*

This module will be responsible for recording the information of the enterprises, stores this information in a database for later use by web.

- *Registration module performance*

This module will be responsible for recording information about the products or services provided by the enterprises, this information will be presented to the public for consumption customer.

- *Module for the town.*

In this module all information concerning the location of a venture with exact coordinates will be recorded.

2. Materials and methods

A. Software development

In the development and implementation of web system it has been used the following tools: PHP, Yii Framework as managing the working environment for the development of server-side web applications.

Bootstrap technology for creating web interfaces with CSS and JavaScript, whose particularity is to adapt the website interface to the size of the device in which it is displayed. This technology provides a wide range of widgets that lets you use Bootstrap easily with Yii[3] Each widget is a small application or program in order to provide easy access to frequently used functions of visual information. [4]

For storing and reading information handling system engine MySQL database is used.

B. Hardware

The web system requires a computer or mobile device for presentation, in the case of managers only require a computer to make the registration of local and benefits (product or service).

For computer security it is necessary to partition the hard drive.

C. Methodology XP

"It is a lightweight methodology (or agile) development based on a set of values and practices of good manners that aims to increase productivity when developing programs." [5]

For a software is of quality is necessary to apply the use of a methodology of software engineering, in developing web system XP (Xtreme Programming) methodology was implemented, this methodology is designed with the software developer to small or large scale, this work tool facilitates interaction between the

programmer and the client turning them into a team, using techniques such as user stories, used for the customer to specify in detail or make a clear statement of software requirements. [6]

XP methodology consists of four phases:

1. *Project planning*

It is the first phase where detailed compilation of all the requirements that will have the system as such, in this part of the user stories and iterations are generated is performed.

2. *Design*

At this point the development of non-functional designs or prototypes that have the system is performed.

3. *Development*

The customer is another part of the development team, do not forget that are creating user stories and negotiate time. Coding should be performed sitting up to standards already created coding, this allows maintaining consistent code and facilitates understanding.[7]

4. *Tests*

Upon completion of the development of user stories is vital benchmark test performed to verify functionality of the code and if an optimization of it is necessary.

The use agile methodology for software development allows the customer to deliver a quality product in the shortest possible time.

3. Results

With the implementation of web system the results are satisfactory, because several ventures with your brand, products or services offered for production and sales were recorded.

Considerable saving paper is a fact, because no longer will be a major resource for advertising,

investment should be done is only to acquire a computer and internet access. As customers can access the system using a computer or cell phone to get service advertising and know their location.

In Figure 1 the diagram of the architecture implemented in the development system shown; to access the system it is done through a web browser, media storage (images) HE performed by a directory (folder) which is located in the address specified in the application installation.

The use of resources are embedded widgets, can give easy access to functions that are frequently used, in this case load an image, it is a feature that will have the same request several times, the request to be conducted from a web browser or any HTTP client, processes it and returns a response. [8]

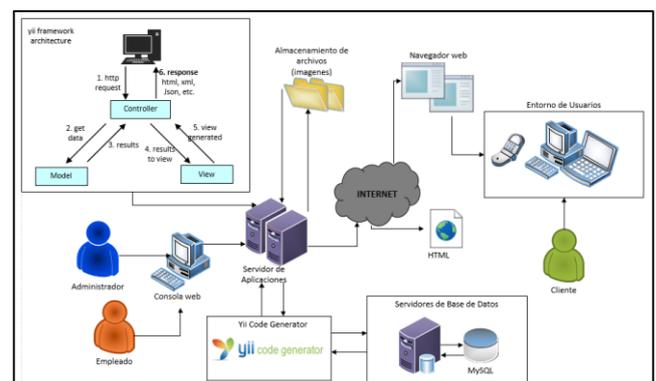


Figure 1: Diagram advertising web system architecture.

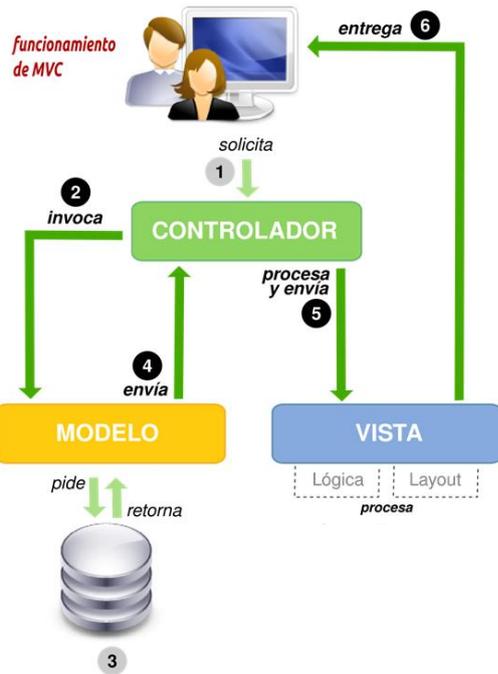


Figure 2: MVC performance diagram

In Figure 2 the diagram of information flow *Vista Model and Controller* MVC architecture used in the web system is shown.

The system has 3 types of roles with different actions within the system:

- *Administrator*: Meets the most important role because it is who assigns roles and tasks to different users, you can create, update and delete information and resources that are handled in the system.
- *Employee*: This role is assigned by the administrator, is in charge of making the advertising process, this type of user manages all of products, you can create, update and delete information.
- *Client*: Access to view and search products or services at your convenience, you can create an account that will allow you to comment and value a specific product that is, will have direct contact with the employee role.

The use of the web system enables users to reduce costs in printing advertising resources such

as posters, banners, flyers, brochures or posters, through the use of advertising web system and the different facilities that this presents to advertise attractively and call the customer's attention.

4. Conclusions

It was analyzed and applied the advertising process for businesses with low productivity.

Successfully applied the XP methodology all stages in the development of web advertising system.

Web advertising system was developed using Yii PHP Framework, in addition to using georeferencing tool google maps to facilitate the user to obtain precise locations of the enterprises.

After applying the ISO / IEC 25022 SQuaRE standard measuring software quality, it was determined that the system has a 82.73% acceptance because it meets the tasks for which it was designed.

Thanks

I thank God for life, for all the blessings and strengths that gave me to get ahead in this arduous road engineering, which is a bit difficult, but not impossible to finish, also my Mom: Marianita Guzman and dad: Ivan Guerra, who over time were the most important in my life everywhere and at all times, from them I learned that perseverance is one of the keys to success pillar and that things must be earned with effort and perseverance, always I will be very grateful to them for their unconditional support.

My classroom teachers who shared their teachings throughout this university life in a correct and friendly way, as if we were peers of them took me a pleasant learning experience.

Finally, my Director of Labor Grado, Ing. Msc. Cathy Guevara, who gave me their support when my mentor and share much of their wisdom, being an important pillar in the whole process of research, experience and skills helped me to successfully complete this project.

BIBLIOGRAPHIC REFERENCES

- José Camilo Daccach T., "Internet advertising effectiveness available to everyone.," 2011.
- [1] Blázquez Resino, JJ, Molina Collado, A., "Analysis of Internet advertising effectiveness," vol. 14, No. 1, p. 18, March 2010.
- [2] Johanny Solis, "BOOTSTRAP AND HOW IT WORKS IN WEB DESIGN," July 8, 2014.
- [3] Òscar Celeiro "widget and how I can use them," Andro4all, 2013.
- [4] Victor Victoria Reyes, "methodology Extreme Programming (XP)," 2013.
- [5] Luis Salazar, "User Stories: a new order in the software requirements," 2013.
- [6] Oswaldo Castillo, Daniel Figueroa, "Extreme Programming," 2010. [Online]. Available:
<http://programacionextrema.tripod.com/fases.htm>.
- [7] Kirk Eder, "Functionality Widgets," 2016.

About the Actor



José Gabriel Guerra Guzman. I was born on January 31, 1993 in the canton Pimampiro. My parents Ivan Guerra and Marianita Guzman.

I realized primary in the School Manuel De Jesus Street no. 2 situated in Cuambo Salinas parish, then I joined the UTN College where I obtained a bachelor's

degree in Physics and Mathematics. I entered the Technical University of North for the title of Computer Systems Engineer.