

IMPLEMENTATION OF A SYSTEM DYNAMIC WEB OF PROMOTION AND SALE OF TOURIST PACKAGES FOR THE AGENCY OPERATOR WAWA TOURS CO. LTDA. APPLYING RESPONSIVE WEB DESIGN

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Abstract. — *The techniques of design web are frequently used by companies of on-line trade (ECOMERCE) and that they have migrate their processes to the cloud. Bootstrap is a design framework for final clients (FRONTEND) that allows to adapt and to integrate pages web to different mobile devices* **Background:** *They have been carried out several implementations of the technical responsive web design inside the industry and special cases in travel agencies. This implementations get the attention to the moment to serve as page web that offers some service in particular this way what has facilitated the access of motives to this pages web, reaching a more extensive market of clients.* **Objective:** *Implement responsive web design techniques in the creation of a page web for the travel agency Wawa Tours CIA LTDA in the process of sale of tourist packages.* **Method:** *There used the metric methodology the same one that was implemented in the practical case: web system of promotion and sale of tourist packages to be opened in the Amazon Web Services (AWS) Elastic Compute Cloud (EC2).* **Results:** *The results of the implementation met reflected in the advertising that I include, the clients' market grew by means of Internet. The final users accede from PC of office up to mobile, tablets, laptops in any resolution of screen.* **Conclusions:** *Web Responsive desing in the design of web pages produces a benefit that is visible in clients who use Internet for simplicar services as possesses information of tourist packages and these could be bought by the same one.*

Key words

Responsive Web Design, Mobiles, AWS, Frontend.

Abstract *Web design techniques are frequently used by online trading companies (ecomerce) and processes that have migrated to the cloud. Bootstrap is a design framework for end customers (FRONTEND) that allows web pages to adapt and integrate different mobile devices.* **Background:** *There have been several implementations of responsive web design techniques within the industry and cases in travel agencies. Such implementations call attention to serving time as a web page that provides a particular service which has facilitated access to such mobile websites, reaching a broader customer market.* **Objective:** *To implement*

responsive web design techniques to create a website for Wawa Tours travel agency CIA LTDA in the process of selling tour packages. **Method:** *web system of promotion and sale of tourist packages to be deployed on the Amazon Web Services (AWS) Elastic Compute Cloud (EC2) metrics the same methodology that was implemented in the case study was used.* **Results:** *The results of the implementation were reflected in advertising covering the customer market grew over the Internet. End users access from desktop to mobile, tablets, laptops at any screen resolution.* **Conclusions:** *Responsive desing web design web pages produces a benefit that is visible to customers who use Internet services like owning simplify information package tours and they can be bought by it.*

Keywords

Responsive Web Design, Mobiles, AWS, Frontend.

1.Introduction

The Operator of Student Tourism Wawa Tours Cía. Ltda. it has as principal aim, complement the matters of the students of the Educational Institutions, across field exits, complementary observation to the matters given in the classroom of study, with the support and endorsement of the educational institutions. Motivating hereby to the student and social tourism, coming to the children, girls and young women with tourist historical - cultural tours together with teachers and authorities.

Nowadays the Operator of Tourism WaWa Tours Cía. Ltda. it offers clients Programas Turísticos Nacionales and International, Student Tourism, Corporate Tourism, Familiar Tourism, Cultural Events, Vacation Plans Royal Decamerón, air national and International Tickets, tours of adventure national flexes for all kinds of tourist, to other

services that are produced by standards of quality, logistics - safety, environmental and social responsibility.

The travel agency Wawa Tours takes charge programming trips more acquaintances since tours in consequence they take charge contracting tourist transport, accommodations, and food entered to inns. Besides that these processes are not working in an integrated way, being more complex the analysis of the sales and to reach a clients' more extensive market.

Nowadays the processes that the agency handles, it is realized of manual form and for advertising door to door excluding the Internet as way of communication that it generates as principal disadvantage to reach a consumers' superette generating the loss of time and money. In addition the ignorance of the citizenship as for what a travel agency offers as service.

It is necessary to to bear in mind that does not exist a suitable follow-up of the processes that Wawa Tours handles nowadays the agency. Besides the above mentioned agency it does not rely on a system of sale or advertising of tours that it should allow him to solve the disadvantages of time of publicizing a tour as well as also the cost that generates this process. In the same way as these disadvantages are generated to I dress the need to create a web system that integrates all the information, which automates the above mentioned processes and which expires with these requirements.

This project has as purpose improve the advertising and promotion of tourist packages of the agency, giving him an IT tool for the publication of a tour and the users' follow-up registered in a propitious system for the sale and promotion of the services that this offer to national and international tourists.

It is important to emphasize that on having integrated the processes in a system, it should reach to the development of the agency like that offering a better experience to the user in Internet.

Of the same way it is indispensable to mention that the system will be available with 2 roles which are: Administrator entrusted to create tours, to publish them, to realize the follow-up from the purchase of the tour and client who will have the possibility of paying the purchase of a tour with the method of payments on line PayPal.

2. Materials and Methods

2.1. ¿What is Responsive Web Desing?

Nowadays there exist Internet users who sail from his mobile devices and who think web pages that they adapt to the resolution of screen of the mobile what does not happen with many pages in Internet.

Responsive Web Design what means web adaptative design, a type of design that allows to adapt the content of a web site to different sizes of browser's windows. Thus, the site is visualized of correct form in any environment, independently of the size of the screen or the device. [1]

Web adaptable design of agreement to the exposed criteria they are technologies of web development that they adapt to different resolutions of screen and are designed to reach a major number of visitors and to have major productivity of agreement to the service that is be big enough.

Nowadays the development of these mobile versions of web pages responsive carries out by means of HTML5 that, thanks to his new capacities of access to the hardware of the device more usable turns for the developers of web pages for mobiles, appears as an excellent option, both for corporate web sites and for sites of electronic commerce.

2.2. Tools

2.2.1. Database

A database is a set of information where one finds all the important information of a company or institution registered of structured form, in tables. These tables contain records, and the records are composed of identified well fields. [2]

2.2.2. Postgresql

Between the concepts on Postgresql it is had:

Postgresql is a server of database advanced, available SQL in a wide range of platforms. One of Postgresql's clear advantages is that it is open source, which means that you have a very permissive license to install, to use and to distribute without paying fees or royalties to anybody. In the top part of which Postgresql is well-known as a database that is kept during long periods and needs little or no maintenance in most cases. In general, Postgresql provides a total cost of property very down. [3]

Postgresql it considers more complete relational object to be worldwide one of the systems of databases to commercial comparison of other managers of databases relational and freely, standing out between his more important characteristics as the following ones:

- Support of transactions.
- Stability.
- Scalability.
- Support multiplatform.

2.2.3. Java Enterprise Edition (JEE)

Java Enterprise Edition previously known like J2EE (Java Second Enterprise Edition) was developed by Sun Microsystems, initiating with the liberation of J2EE 1.3, the specification was developed under the Java Community Process. [4]

JEE comes expressed with the language of programming java, from this language they develop one without number of web applications and of office that attend to the needs of a programmer, later one presents the architecture of JEE's.

Architecture of Applications JEE

The model of applications Java EE defines an architecture for the implementation of services as applications of several levels that offer scalability, accessibility and maneabilidad necessary for applications of managerial level. This model divides the necessary work to implement a service of multiple levels in two parts: the logic of business and presentation to there being implemented by the developer and the services of the standard system provided by the platform Java EE. [4]

This way the architecture of web applications JEE they try to separate levels or caps in which it is achieved to differentiate the logic of programming with the presentation and the information of the application obtaining like proved a structured programming that gives content to the use of good practices as the use of architectural bosses and of design.

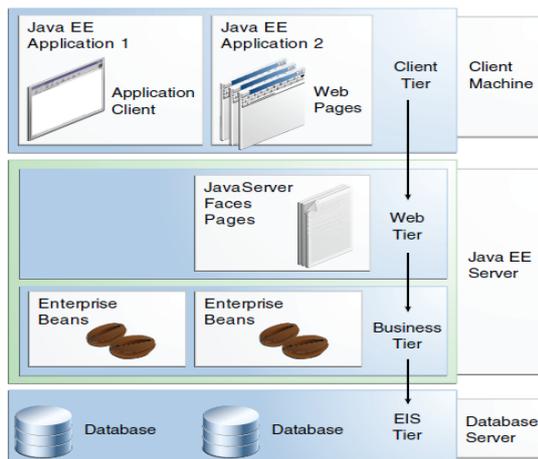


Illustration 1: Architecture of applications JEE

Source: [5]

Development of Applications

One of the lines in the evolution of the technology throughout the years has consisted of the manufacture of devices increasingly small. From the first computers of the forties, which they were needing of big rooms where to lodge, to the personal computers that anyone could have in his office, and later the portable computers, ultra-portable, PDA, Smartphone and tablets, the jump has been enormous. [6]

Of the same way in the integration of the frameworks front end that web design adapt more to the technologies responsive they are Bootstrap, Foundation, Semantic UI, Mash by Yahoo!, UIKit by YOOtheme of which the variants depend on the framework backend it is so in the integration

of applications java Bootsfaces is had primefaces bootstrap, primefaces Mobile who attend to the needs of the developer and are designed by adaptable intentions.

2.2.4. Technology JSF (Java Server Faces).

Java Server Faces (JSF) is a technology and framework for applications Java based on web that simplifies the development of user's interfaces in applications Java EE. JSF uses Javaserer Pages (JSP) as the technology that allows to do the deployment of the pages but also to be possible to accommodate to other technologies as XUL (acrónimo of XML-based User-interface Language, language based on XML for the user's interface). [7]

The principal components of this technology are:

- A frame of components of user's interface.
- A flexible model to render components in different types of HTML or different languages of marked and technologies. An object Renderer turns the information stored in an object of the model to types that can be represented in a sight.
- A standard RenderKit for the generation of marked HTML/4.01.

This functionality is available by means of standard APIs of Java and XML based on files of configuration. JSF's new characteristics in the platform Java EE 7 are 18, of between more distinctions are:

- The aptitude to use annotations instead of a file of configuration to specify beans administered and other components.
- Facelets, a technology that replaces JavaServer Pages (JSP) using files XHTML.
- Implementation of standards HTML5 with previous configuration phassthrough for the support (xmlns:p="http://xmlns.jcp.org/jsf/passthrough").
- Support Ajax to interact with HTML5 (xmlns:jsf=http://xmlns.jcp.org/jsf).
- Componentes compuestos.

2.2.5. Amazon Web Services.

The Center of AWS's architecture is designed to offer him the orientation and the practices recommended of architecture of necessary applications to create trustworthy and highly scalable applications in AWS's cloud.

AWS EC2 is a technological platform that provides adjustable processing and IT capacity, allowing to climb rapidly as the needs of the users change. In addition it provides tools to the developers for the creation of web applications of quality.

Also it provides the developer a great variety of instances compatible with the languages most used in the development of applications.

In the figure 2, there appears of graphical form the architecture of a web application in AWS EC2:

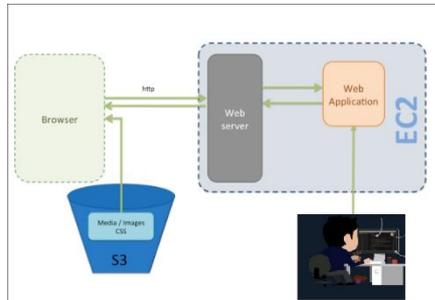


Illustration 2: Architecture AWS EC2

2.2.6. ¿What is the methodology XP?

XP is a fast methodology centred in promoting the interpersonal as key relations for the success in development of software, promoting the teamwork, worrying for the learning of the developers, and providing a good climate of work. XP bases on constant feedback between the client and the equipment of development, fluid communication between the participants, simplicity on the implemented solutions and courage to face changes. XP is defined like specially adapted for projects by vague and very changeable requirements, and where a high technical risk exists. [8]

The methodology proposes the following characteristics:

- **Iterative or incremental development:** Small improvements, some after others.
- **Unitary constant tests:** Frequently repeated and automated, including you try regression.
- **Programming in pairs:** It is advisable that the programming carries out for two persons in the same position. Since the code is checked and discussed while he writes himself.
- **Frequent integration of the equipment of programming with the client or user:** A representative of the client works together with the equipment of development.
- **Correction of all the mistakes:** Before adding new functionality. To do frequent deliveries.

• **Refactoring of the code:** It is to say, to rewrite certain parts of the code to increase his legibility and mantenibilidad but without modifying his behavior. The tests have to guarantee that in the refactoring no failure has got.

• **Property of the code shared:** Instead of dividing the responsibility in the development of every module in different workgroups, this module promotes the one that the whole personnel could correct and extend any part of the project. The frequent tests guarantee that the possible mistakes will be detected.

• **Simplicity in the code:** It is the best way of which the things work. When everything works functionality will be able to be added if it is necessary. The extreme programming smart that simpler to make something simple and to have little working overtime it to change if it is needed, that to realize something complicated and probably to never use it.

In the figure 3, it shows to detail the life cycle of the methodology XP:

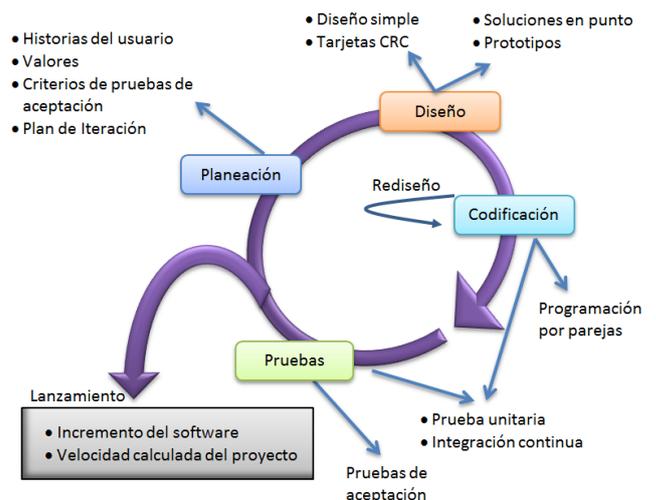


Illustration 3: Life cycle of XP

3.Results

- Once analyzed all the information with regard to a tourist package, could obtain important information for the generation of reports for the web system.
- The manager of database Postgresql allows to take with more facility and safety the generated information, and by means of the different reports it is possible to observe that types of tours improve themselves more and to which putting more emphasis in offering.
- On having integrated the processes that the travel agency handles, it diminished

considerably the time of publication of a tourist package.

- Web Responsive design is a technology that improves the experience of navigation of the user on having offered adaptable and flexible web pages, independently if the device that it is using is mobile, Tablet or portable computer or of office.
- With this system there are opened the possibilities of the automation of the different processes of the company.

Since final result obtained a software in the web to which it is possible to accede from any equipment with Internet, acceding to the following web direction inside the mariner:

<https://wawa-tours.com/>

3.1 System

Later there appear some captures of screen of the system displayed AWS EC2:

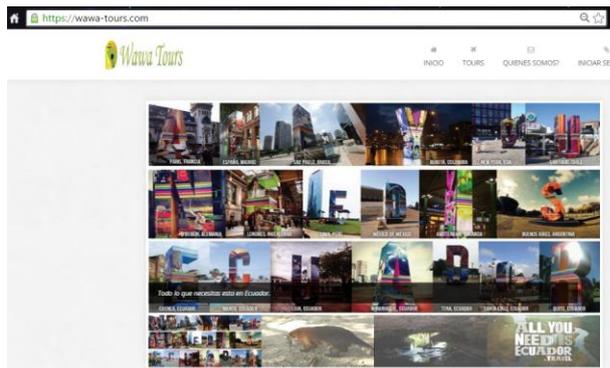


Illustration 4: Main Page

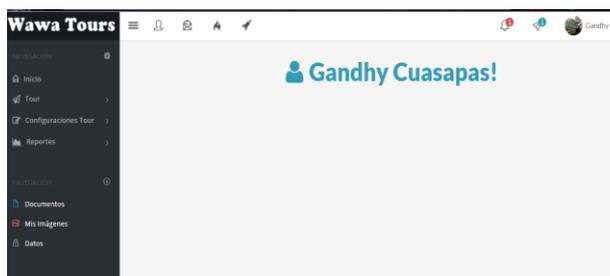


Illustration 5: Admin.main page

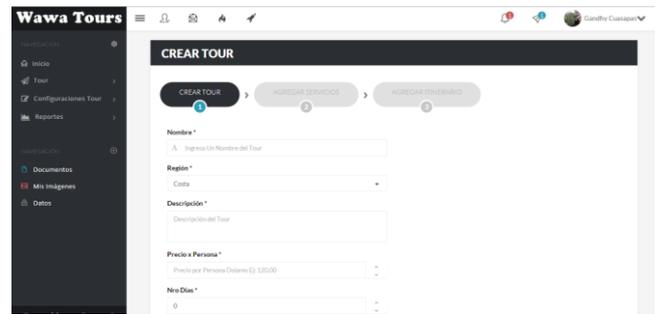


Illustration 6: Créate tours page

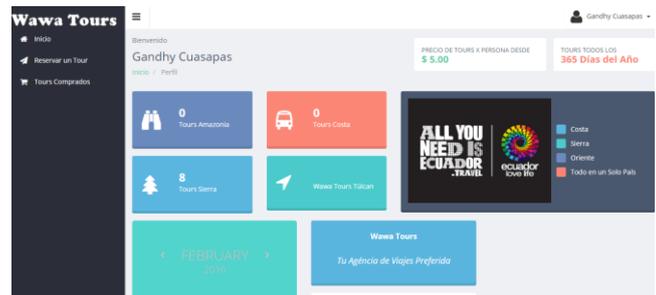


Illustration 7: Clients main page

4. Conclusions

- With the implementation of the system there spreads the clients' market of a most ideal way.
- To use free software in the development of the system turns out to be very economic for the administrators of the agency as for costs that the implementation of the system incurs.
- The system is developed in order that in future integrations of modules this one ready to climbing with the time.
- On having worked with the database Postgresql, the information be to be sure, since this platform has a great safety as for confidentiality.

5. Gratefulnesses

An eternal gratefulness for the Technical University of the North and the Faculty of Engineering in Applied Sciences, for giving me the opportunity to grow intellectually with values and rights and social responsibility.

A very special gratefulness to whom Wawa Tours administers the travel agency for offering the support necessary for the accomplishment of the system.

To my family for giving me spirits and forces to continue with my career, and thanks to it I am achieving it.

To my companions of the University who were and they are of great support in the good and bad moments that we spend as students.

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6. ABOUT THE AUTHOR



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