Articles

Development of an intelligent technology platform for health self-management through an application focused on the comparative analysis of the use of a wiki.

Desarrollo de una plataforma de tecnologías inteligentes para la autogestión de salud mediante un aplicativo enfocado en el análisis comparativo del uso de un wiki

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ABSTRACT

The analysis that was developed through this project on the use of a Wiki to improve communication between users and information manager is given by the boom of requirements and amount of data entered into the platform that should be interactive and friendly with those involved. Therefore, a study was carried out to analyze a Wiki that allows the implementation of data without losing data and at the same time is efficient and effective in finding information required by users. A platform creates information modules that are visualized in a technological way and that require an excellent data visualization, but sometimes when the information is collected it is at risk of being lost. For this reason, the Project Management and Communications module was created to access the feasibility of implementing a Wiki that protects the information entered through data security and that is filtered, allowing the information entered to be adequate for the user.

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Keywords: Qualitative, descriptive, business

RESUMEN

El análisis que se desarrolló a través de este proyecto en la utilización de un Wiki para mejorar la comunicación entre los usuarios y administrador de información se da por el auge de requerimientos y cantidad de datos ingresados en la plataforma que debe ser interactiva y amigable con los involucrados. Por ello se llevó a cabo un estudio de análisis de un Wiki que permita implementar datos sin que se pierdan datos y que a su vez sea eficiente y eficaz en encontrar información requerida por los usuarios. Una plataforma crea módulos de información que se visualiza de forma tecnológica y que requiere de una excelente visualización de datos, pero que en algunas ocasiones al levantar la información corre riesgo de perderse, para eso se crea el módulo de Gestión de Proyectos y Comunicaciones que accede a la factibilidad de implementar un Wiki que proteja la información ingresada a través de seguridades de datos y que sea filtrada permitiendo que la información ingresada sea adecuada para el usuario.

Palabras clave: Cualitativa, descriptiva, empresa

INTRODUCTION

Information Technologies allow users to simplify daily activities through the use of applications that help to easily access and manage information, whether it is of a personal or professional nature. Corporations invest thousands of dollars in the creation and incorporation of infrastructure that facilitates the creation of new means of mass communication and enables the company to stay ahead of the constantly growing technological environment. Mobile applications allow subscribers to access information such as: reading the newspaper, accessing world news online, social networks, health, sports (online instructor), food, mapping, tourism, etc. Users who handle mobile applications obtain several additional advantages as this allows them to achieve greater utility of their use, ease and speed with which they access information because the applications are present on their terminals at all times and they do not need to enter data at each access.

Also, the storage of your data is secure and helps the user save time and customizing the application to your liking, being in turn a channel that enables immediate purchases from anywhere having a playful and friendly character becoming an important element of entertainment. It is understood that information is a set of data or synthesis of contents that give importance to the different entities involved, being primordial for the representative managements; currently it can be considered that we live in a time when corporations discover that information is their main support through the reciprocity, generation and recreation of all kinds of contents and data both at a national and global level. At the same time, there are technological means that allow users to access remotely and securely to important information or entertainment; the advances are that through a mobile device can handle the APP HEALTH

platform that deals with different causes with medical monitoring. The systems it employs are different but the update allows to increase several pathologies as in its beginnings it was focused on diabetes now it can also have the same forms of help, but with asthma. Data is considered as a set of information and/or content that provides quality multidisciplinary learning or simply knowledge of specific and personal areas. Currently it is considered that corporate bodies find the information as a support that is updated nationally as in the world. For that reason the data or personal information must present security at the moment of mounting them in a platform. The collection, distribution and availability are effective tools to achieve the proposed objectives. Therefore, the computer work concentrates its care to gather and transmit the data that are prepared and processed in the various fields of the architectural model in the development of the APP SALUD project, which in turn can be clear to the various stakeholders and project communication between them.

In the development of the implementation of services to support the mobile application, we have the Content Management System, better known by its acronym CMS, which allows us to create a support structure for the creation and administration of content by editors, participants and other users.

At the administrator user level, it consists of an interface that controls one or several databases in which we can make modifications of the content, accessing with the user and password. Within the transformation of the Internet towards content portals and high participation of users directly, through the different information platforms, has turned content managers into a fundamental tool for public and private institutions, as well as for users.

A Wiki is called a website, whose pages can be edited directly from the browser, where the users themselves create, modify or delete content that they generally share. The most important applications and to which it owes its prestige so far have been the creations.

It is common to see a project member who has not received the necessary information during the development stage, to the point of affecting his work or even the work of the other members, even if the information is available and backed up.

For which an efficient and effective planning or strategy must be created:

1. Planning
2. Distribution
3. Manage

According to the Royal Spanish Academy (R.A.E.) the meaning of the word information is defined as: "Communication or acquisition of knowledge that allows to expand or specify what is possessed on a given subject". Organized set of processed data, which constitute a message that changes the state of knowledge of the subject or system that receives the message.

There are several approaches to the study of information, in which I emphasize the following: In computing and information theory, as a measure of the complexity of a set of data. In computer science, information is the grouping of processed and organized data composed of messages, knowledge, systematizations, functions and any agility pattern that acquires a deal with the computer. Each individual evaluates the possible consequences and adapts his attitudes and actions according to the foreseeable consequences deduced from the meaning of the information.

This refers to what rules the individual or the expert system must follow to modify its future expectations about each possible alternative.

"Information Systems (IS) are designated as a linkage of syntheses that interact with each other in order to support the activities of an organization. An IS executes 4 basic functions which are: Input, storage, processing and output of information." ((Ccmbenchmark, s;).
(León, J.;, 2015) expresses that, from the digital revolution, driven by the Information and Communication Technology (ICT), arises the proposal for change, to replace documents, bureaucratic and cumbersome procedures, by access and use of ICT, which will highlight the comprehensive development of public management in Ecuador, through the implementation and use of Information Systems (IS). In addition, the National Plan for Good Living (PNVB) in its objective 1, paragraphs 1.2f and 1.5 describes the importance of ICT in the improvement of processes and strategic management of enterprises.
Set of technologies developed and implemented to manage information and send it from one place to another. Information systems: technical and legal aspects (Rodriguez Rodriguez, José Manuel , 2013),
There are 2 types of ICT which are:

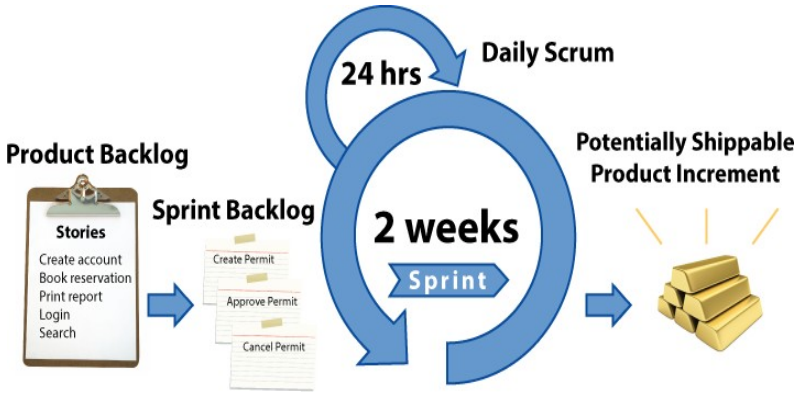
- Information system
  - ✓ Emergence in the development of computers
  - ✓ Rapid incorporation of new technological changes as they occur.
- Telecommunications
  - ✓ Appearance of telephone networks
  - ✓ Global network perspective

(Mulcahy, Rita, 2013) refers: "Two types can be defined: One of them is denominated as the recipient's belief about the knowledge that the sender possesses, defending a reality implying that it is not real. The gentle knowledge gives way to a chain of losses or faults in the sender's information, losing the veracity of the information because it is outdated, producing gaps that can be rescued through study and appropriate preparation, making it dependent on the practice of a profession or professional activity. Another error is the so-called transmission bias, which is defined as the recipient's dogma; in the desire to transmit knowledge, the sender defines it as an exact departure from reality as insecure. This type of error is considered more dangerous because it is categorizing a negative relationship on the part of the addressee and the sender loses all naivety. Generally speaking, we can define the first error in "what is said", which includes the content of the information; the second error is centered on "how it is said", i.e. the way in which the information is expressed".
It involves making the necessary information available to project stakeholders in a timely manner. Information distribution includes implementing the communications management plan, as well as responding to unexpected requests for information.
The means or manner in which information can be collected and retrieved through a variety of media including manual filing systems, databases, project management software and systems that allow access to technical documentation.
The distribution of project information can be distributed using a variety of methods:

- Project meetings, distribution of printed documents, manual filing systems, and electronic databases for participatory access.
- Electronic communication and conferencing tools, such as e-mail, fax, voice mail, telephone, video conferencing and Internet publishing.
- Electronic tools for project management, such as web interfaces with scheduling and project management software, meeting support software and virtual offices.

Involves the collection of all baseline profile data and the distribution of information to stakeholders, in general this performance information includes how resources are being used to achieve the proposed project objectives. This information on the completion status of deliverables and what has been achieved is collected as part of the project execution which is based on the completion of deliverables.
It includes selecting and providing all the necessary information progressively during the elaboration of a software engineering project.

Illustration 1. SCRUM



Elaboration: ((Rasmusson, J;, 2015)

(Scuminc, S;, 2014) It is one of the best practices where a flexible method of rapid development is implemented through which people can face problems either complicated or simple working as a team in such a way that a product can be delivered. In Scrum the features are taken from the end user's perspective, becoming user stories, the collections of all these features are known as BACKLOG of the product. Once you have the wish list or the BACKLOG of the product you must start planning what user story specifically is going to be put in the product release, to build this product you must have many people in the team and these come to have roles:

- **Product Owner:** Responsible for getting the right features into the product BACKLOG; represents the users and customers of the product and also assists in product routing.
- **Scrum Master:** His job is to ensure that the project has a smooth process and that all team members have the necessary tools to perform their tasks, he is the one who organizes the meetings and the planning of the product release and becomes the project manager.
- **Team or Developer:** is the one who builds the product.
- **Tester:** Tests the product to ensure that everything is working properly.
- **Customer:** uses the product and is expected to pay for it.

COMPARISONS BETWEEN THE MOST USED CONTENT MANAGEMENT SYSTEMS

In order to find out which are the most used or most popular managers, a table has been created with the data from (W3techs,;, 2009 - 2015) to know its usability throughout the year and the percentage of growth it has obtained.

Figure 1. Comparisons of Content Managers

Gestores de Contenidos	2015												Porcentaje de Crecimiento
	01 de enero	*01 de febrero*	*01 de marzo*	*01 de abril*	*01 de mayo*	*01 de junio*	*01 de julio*	*01 de agosto*	*01 de septiembre*	*01 de octubre*	*01 de noviembre*	*16 de noviembre*	
WordPress	23,30%	23,30%	23,40%	23,60%	23,80%	23,90%	24,10%	24,20%	24,30%	24,60%	24,90%	25,10%	8,34%
Joomla	2,90%	2,90%	2,90%	2,90%	2,80%	2,90%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	-6,66%
Drupal	2,00%	2,00%	2,00%	2,00%	2,00%	2,10%	2,10%	2,10%	2,10%	2,10%	2,10%	2,10%	10,26%

Prepared by: Roberto García

DRUPAL: In 2000, Dries Buytaert University student created a website to link communication with his friends in order to share reports and events, once graduated in 2001 he released his software as[2] Open Source, today Drupal is developed and maintained by one of the largest communities of Open Source users; 14 years of development and thousands of modules (known as contributing) with functionalities and features that anyone can freely use for your website, so Drupal is generally called the power of ***Connect.*** (Drupal Hispano.;, 2010)

MATERIALS AND METHODS

I.T. has a great impact on business processes within organizations due to the effective and efficient service management processes that its methodology employs. Those technologies that allow to support information systems, are called as the composition and affinity of computing, networks and methodology for data processing, where its primary mechanisms are:

- The human element,
- The information included in the information,
- The equipment
- Substructure, routines or software
- The units of information exchange, policy syntheses and measures in addition to economic assets.

According to Manuel Garrido, 2012: "Information Technology services comprise a repertoire of activities that starts from the design of the architecture to the continuous management of the technological infrastructure". One of the ICTs in use and with much relevance today is IP-Telephony, this technology has evolved over time based on the needs of man, IP-Telephony allows telephone calls to be made over a network using each of its components (Terminals, Gateways, Gatekeeper, MGC, IP clouds) and protocols that help the entry of information data made by a sender. The new information and communication technologies designate at the same time a set of technological innovations but also the tools that allow a radical redefinition of the functioning of society.

I.T. Services management is composed of three factors, which are:

- Persons
- Processes
- Technology

"Applied Research consists of original work undertaken to acquire new knowledge, and is fundamentally directed toward a specific practical objective."
(http://www.fundacionunam.org.mx)
Applied science has been used because it seeks to solve specific problems or a set of problems, or even the creation of new products.
In the case of the research, it has been developed in a scientific-research manner due to the use of information reception techniques, documentation and technical knowledge.
In addition to research tools such as technology and surveys.
"Applied Research consists of original work undertaken to acquire new knowledge, and is fundamentally directed toward a specific practical objective." (http://www.fundacionunam.org.mx)
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The type of research that was carried out is an applied research because it is based on solving practical problems using the knowledge we have gained from the information collected, thus bringing benefits to society.
Population: For the present thesis, the population is constituted by the 15 teachers of the Networking and Telecommunications Engineering Career.
Sample: Since the universe population is made up of 15 teachers, we will work with the total population as a sample for our data collection.
Technique: It was decided to choose the survey as the data collection technique, which will be carried out to a specific number of teachers with a profile in the software areas of the Networking & Telecommunications Engineering Career of the Faculty of Mathematical and Physical Sciences of the University of Guayaquil.
Research Instruments: The instrument used to collect the information and data in the research is a survey with predefined questions that will be useful to the research in measuring the variables in the best way. By means of the survey, obtaining the most punctual and precise information possible.
Collection of information: The information collection was obtained on Monday, December 11, 2017 at the facilities of the Networking and Telecommunications Engineering Career in the N1 laboratory from 19:00 hours until 20:00 hours of the same day.
Processing and Analysis: A questionnaire was elaborated with respect to the collection of information in order to help or guide us in determining our idea to defend.

RESULTS

A questionnaire was elaborated with respect to the collection of information in order to help or guide us in determining our idea to defend.

Table 1. *Number of teachers surveyed*

TEACHERS SURVEYED	NUMBER
SOFTWARE PROFILE	

Do you think that a Wiki would help to better manage information?

Reply	**Quantity**
YES	
NO	**-**
Total	

Table 2. *According to the sample, it was determined that around 100% of the teachers*

How often do you interact with a Wiki?

Reply	Quantity
ALWAYS	
A MENUDO	
RARELY	
ALMOST NEVER	**-**
Total	

According to the sample, it was determined that about 67% of the teachers surveyed always use a wiki, while 20% often and 13% rarely, the sample, it was determined that 93% of the teachers surveyed consider it important to have a tool for communication and consultation of information during the development and implementation of Software Engineering Project**.** The teachers prefer 81% to Drupal, 13% to Joomla and 6% to WordPress because Drupal allows better data storage and offers various types of management in communication without loss of information. According to the survey, 100% of the teachers agree with the use of a Wiki for software engineering projects and recommend that it should be implemented in different fields.

DISCUSSION

In reference to the survey carried out with 15 teachers of the Networking and Telecommunications Engineering Career in reference to the use of a Wiki for the self-management platform for health, 10 questions were asked; the same that validate the Idea to Defend considered. With the creation of the Wiki web portal. Drupal, which allows the agile implementation of coherent and updated information that also reduces the risk of presenting inconsistencies or errors by the members of the development of the Software Engineering Project in a remarkable way. It is determined that in obtaining 85% of the sample used and solvent load in favorable response to the implementation of a content manager or Wiki in the development of a Software Project, it could be considered adequate. Therefore, it is considered feasible the implementation of Drupal in the APP SALUD platform, which will allow a better management of information to users.

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