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TOPIC:

"AUTOMATIZATION OF PROCESSES OF FOLLOW UP OF RESOLUTIONS, GRADUATES AND PRE PROFESSIONAL PRACTICES OF THE CAREERS OF THE UTN"

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AUTOMATIZATION OF PROCESSES OF FOLLOW UP OF RESOLUTIONS, GRADUATES AND PRE PROFESSIONAL PRACTICES OF THE CAREERS OF THE UTN

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Abstract. *Information in one of the main axes in the different processes handled at the academic and administrative levels in the Técnica del Norte University, is therefore important to keep this information properly and automated manner. Today with advances and existing improvements based on technological tools, opens an excellent opportunity to improve processes and a more appropriate management of information, in order to maintain organization and accuracy and therefore achieve the proper decision making of the processes involved in this project. Using the tools appropriate and consistent with the reality of the University, seeks to generate systems that allow users to maintain a proper handling of the information, the project maintains the conditions to be attached to the existing structure and is based on a series of consecutive steps specified by RUP development methodology.*

Keywords

Information, Process, Technology tools, RUP.

1. Introduction

Técnica del Norte University in its training of successful professionals, handles important information related to academic and administrative processes of different careers. The entities responsible for watching over these processes have in their hands the difficult task of safeguard the information and the proper use of this, to focus them in making better decisions to improve the tasks being performed at the University.

In this way becomes essential to provide the necessary means to safeguard information, to achieve this objective is necessary to maintain a clear focus about the process that must be performed, the actors involved and their tasks in each of the modules and the use of existing technological.

2. Problem

Today we live in an advanced technological growth, with increasing information and tools to improve their management and thus optimize processes. On this way is very important the implementation of an appropriate mechanisms to ensure the success of the institution.

Maintaining an organized structure of information and appropriate management of processes in the University is one of the critics points to be considered, the automatization of the processes carried out is essential to keep to the UTN as regional benchmark and expand to national level and also focuses on compliance with the standards of accreditation plan.

3. Justification

Taking into account the rapid technological progress and the constant updating of knowledge in the computer field, it is important that the University adopt plans and programs of continuous automation to be at the forefront of technological development.

Precisely the purpose of implementation of this project is to provide efficiency in meeting specific both administrative and academic processes of careers at the Técnica del Norte University, carried out using tools that provide speed and greater accuracy to compliance with the same. Besides this way it contributes to one of the fundamental axes proposed in the indicators for the accreditation of University careers.

The direct beneficiaries will be students, administrative staff, teachers and authorities they will have a better access to information concerning the processes to be treated and indirect beneficiaries will be the authorities of the University who watch for the betterment of all careers that comprise it.

4. Main target

Implement a system for the management and control of academic and administrative processes of the careers of UTN, focused to improving those processes; using tools.

5. Scope

The modules to be developed in this system seek to contribute to the improvement of the processes administered by the University, have a more appropriate structure thereof and in addition to providing benefits to members of the Honorable Consejo Directivo, staff, students and graduates of the University.

The implementation of the system will collect information useful for optimizing certain management processes that are linked to the aforementioned sectors, as well as to reap the benefits that technology provides us with respect to management and structuring of the information.

Definitely it seeks to form a link between technology and people, while providing a more efficient service to sectors.

The modules considered are the following:

5.1 Follow up of Resolutions

This module is aimed at gathering information regarding the decisions made at Consejo Directivo, which are held in the different career of the University, to avoid inconsistencies, losses and improper handling of it. It is planned to automate such information both to carry an organized process to centralize information and thus make it within reach of its beneficiaries.

5.2 Follow up of Graduates

This module will perform the following functions:

- Complement existing processes for updating the information of database about graduates and graduates of the UTN and their professional application fields.
- Collect information from companies with which the graduates had and have labor relations, as well as its scope.
- Implementation of the Exchange job oriented students, graduates and graduates from college careers.
- Handle information if graduates of the UTN, through surveys. Complementar los procesos existentes de actualización de la base de datos informativa acerca de los egresados y graduados de la UTN y sus campos de aplicación profesional.

5.3 Job Exchange

The job exchange of the UTN, is a complementation of the module of Follow up to Graduates, to perform the following functions:

- Manage information related to agreements between the UTN and different companies.
- Create and manage announcements of job opportunities.
- Conduct follow-up announcements and applications of students and graduates for careers of UTN
- Manage information related to agreements between the UTN and different national and international companies.

5.4 Follow up of the Pre Professional Practices

This module will perform the following functions.

- Recording information about pre professional practices started by the student.
- Manage and follow up the pre professional practices.
- Manage and follow up the pre professional practices.

6. Development Methodolgy

For this project will be used the methodology of development Rational Unified Process RUP which is used in the process of software development, able to adapt to the needs of the organization in which it is implemented and whose functionality is based interacting with the user as a fundamental part of the system development.

RUP uses a four-step system, each consisting of one or more iterations.

Figure 1. RUP Phases.
Source: (Jaldin, 2010)

6.1 Inception Phase

At this stage is determined the vision of the project by understanding the problem and the technology used, leading to the creation of use cases.

6.2 Elaboration Phase

At this stage is carried out the project plan, the use cases are strengthened and risks will be mitigate, thus determining the optimum architecture.

6.3 Construction Phase

At this stage the product is obtained in the initial phase, with the functionality of the finished product, ie, being fully operational. Furthermore the user manual is made.

6.4 Transiction Phase

At this stage the product, meeting the customer standards and proceed to training in product handling and maintenance is completed.

7. Tools

The technological tools to be used in this project are:

- Oracle Weblogic Application Server 11g.
- Oracle Application Express (Apex). - Tool Fast Web application development environment that runs an Oracle database. APEX used as main languages, SQL and PL / SQL and integration with HTML has evolved to provide greater adaptability to market needs.
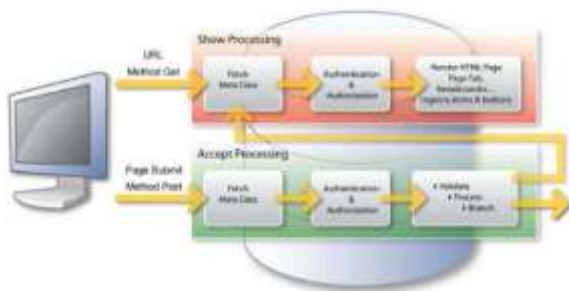

Figure 2. *Processing of an APEX page.*
Source: *(Naranjo, 2014)*

8. Results

The development and implementation carried out in the modules covered in this project have been implemented based on the existing infrastructure in the Departamento de Desarrollo Tecnológico e Informático of the University, ensuring compatibility and adaptability.

The information collected and shown in the different modules, is located on the servers of the University and under the same structure database of all information gathered by the integrated system.

The developed web systems are focused to meet the needs of the sectors that are oriented, providing the user, ease of use and friendly interface.

For access to the systems, it is necessary to have a computer, internet access and also be assigned a user name and password with permissions to sections in each case, since it is oriented both administrative staff, and students and teachers of the University.

The main benefits obtained with the development of this system are listed in the table below:

Table 1. Impacts and benefits of the system.

IMPACT	BENEFITS
Economic	With the implementation of the project modules was achieved the improving the processes involved in it, improved runtime and feedback of information from the database of the University and its constant updating.
Social	Process Improvement, user satisfaction of the modules and aggrandizement of the Técnica del Norte University.
Tecnology	The UTN maintains a constant update on the quality of software, so it is important to use this technology for improving the developed of the Integrated System and the user satisfaction.
Environmental	Decreased use of paper by automating the processes covered in this project, since it will prevent store information only on paper, and have that on writing in certain periods of time as they have access to it at any time.

Fuente: *Author*

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Born on March 3, 1990 in the city of Ibarra, degree in Física - Matemática of the Nacional de Señoritas "Ibarra" College now Ibarra Education Unit.

The university studies were conducted at the Técnica del Norte University, Faculty of Engineering in Applied Sciences on the career of Computer Systems Engineering.

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