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## Design and Development of Career Placement System

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### Abstract

**Aim:** Since it is now the 21<sup>st</sup> century, Western Philippines University (WPU) also has to upgrade its technology by automating some of its manual works. The career placement system was developed to help the Career Placement Office of the Western Philippines University to facilitate the recording, monitoring, and management of student's personal information in preparation for their career. Basically, the system will generate a resume of the student. This is also to enable the students to update their personal information and lastly to efficiently manage and monitor student personal information.

**Methodology:** The researchers used input-process-output (IPO) model as a guiding tool, hence the system will be design and developed. The researchers used RAD (Rapid Application Design) methodology for the Career Placement System. Rapid Application Development focuses on gathering customer requirements through workshops or focus groups, early testing of the prototypes by the customer using iterative concept, reuse of the existing prototypes (components), continuous integration and rapid delivery. There are four phases in using the Rapid Application Development: definition, build, trial and live. This system was developed by the researchers. Data collection technique used interviews to gather data to come up with a design of the system.

**Results:** Prototype model is a software development model wherein it was built, tested, and then reworked as necessary until an acceptable and desired prototype is achieved.

**Conclusion:** Based on the research, the objectives of the system were successfully achieved since it is currently being deployed and used at the Career Placement Office in Western Philippines University Main Campus by applying the RAD method. Its main purpose it to be able to create a system that generates resume that can be use by the student when applying for work and enable the student to update their personal information which was achieved by the system.

**Keywords:** RAD Methodology, Career Placement System, TAM instrument, Automate

### INTRODUCTION

The Career Placement System was developed to help the Career Placement Office of the Western Philippines University to facilitate the recording, monitoring, and management of student's personal information in preparation for their career. Choosing a career is crucial in every student since it will define their future, it's either they make it or break it that's why they have to choose wisely from that start, decisions that will be made that will impact the individual's concept, social effectiveness, creativity, economic productivity, civic and moral responsibility throughout the lifetime. The system was a web-based using PHP and HTML as the front-end or the interface and MySQL serves as the database of the system.

The manual system is considered less effective because it requires the new student-candidates to come to campus to carry out the registration process, starting from taking the form, filling out the form manually, then submitting the required form and file to the new student's registration committee.

Web Based Career Guidance is very important to Educational System. There is an existing Manual Career Guidance System with human counselors in charge, but this system is plagued with the following problems: few number of human counselors, unavailability of a counselor in a good number of schools, few number of counselors attending to students during school hours and the office of a counselor in schools are so unpopular that students hardly meet



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them for career counseling. The following scripting languages were employed: PHP, MySQL, HTML, Java Script and CSS. The system was implemented and tested with 50 students and 76% of them found the career system very useful.

A Career Guidance System where students can see various career opportunities, the system shows various fields available after 10th, 12th for graduation and after graduation fields are also available. It also lists various colleges available where students can search colleges by their courses (D'Mello, et al., 2016).

Rapid applications development (RAD) appears to have first become topical with the publication of a text by James Martin with the same title (Martin, 1992). Rapid Application Development (RAD) is a methodology used to develop software. This method is able to reduce time to develop software. This becomes consideration to choose the Rapid Application Development as a methodology to develop Dutatani Website. (Delima, et al., 2017). The RAD model requires minimal planning with a fast prototype generation approach with more customer satisfaction and less time consumption. The world is moving with most complex and fast systems, and there is a need for more efficient and fast system-building models. Another pitfall of the RAD model that had led to this research is that it is fast but less quality-oriented; also, if developers and customers are not committed to the rapid-fire activities necessary to complete the system in a much-abbreviated timeframe, RAD projects will fail (Fatima, et al., 2014).

### Conceptual Framework

The researchers used input-process-output (IPO) model as shown in Figure 1 as a guiding tool hence the Design and Development of Career Placement System was developed.

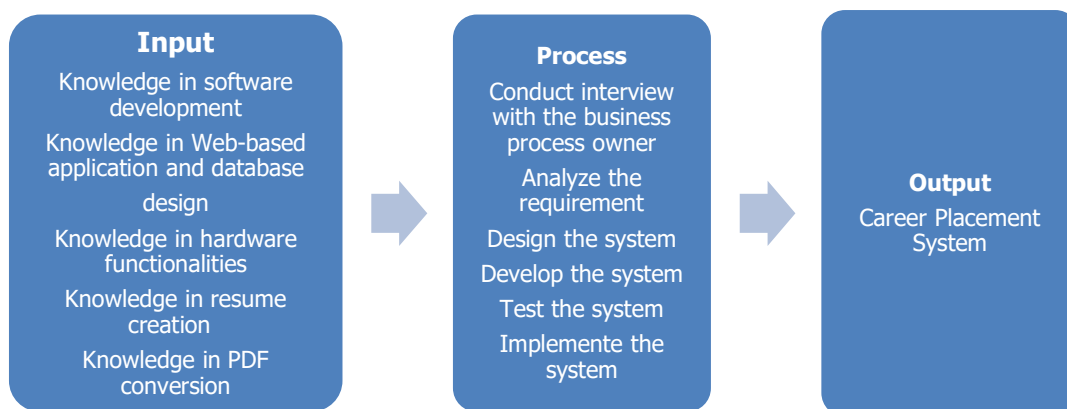


Figure 1 Input-Process-Output

### Objectives:

This study aimed:

1. To design and develop career placement system of WPU.
2. To develop a system that will generate students resume.
3. To enable the students to update their personal information.
4. To efficiently manage and monitor student personal information

### METHODOLOGY

#### Research Design

The researchers used RAD (Rapid Application Design) methodology for the Career Placement System. Rapid Application Development focuses on gathering customer requirements through workshops or focus groups, early testing of the prototypes by the customer using iterative concept, reuse of the existing prototypes (components), continuous integration and rapid delivery. RAD is a methodology for compressing the analysis, design, build, and test phases into a series of short, iterative development cycles. (Beynon-Davies, et al., 1999). Rapid application development (RAD) is an approach to information systems (IS) development which is much discussed in the practitioner literature.

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Requirement Planning → Design Development → Testing → Implementation

Figure 2 Rapid Application Development Process

**Research Development Process**

The project followed the project lifecycle with the following phases:

- Definition Phase -> Analyze and Plan
- Build Phase -> Design and Build
- Trial Phase -> Evaluate and Revise
- Live Phase -> Launch and Support

During the Definition Phase, this included analysis and planning wherein the needs of the end-user were identified and documentation of the business process was also done. For the Build Phase, the researchers created the system design: technical infrastructure design, database design, user interface design, report design), and proceeded to the coding of the proposed system. The Trial Phase included the various tests to be performed on the system: Unit Testing, System Testing, User Acceptance Testing, as well as any rework or revisions that need to be done. Finally, in the Live Phase, the system has undergone Implementation Planning, Hardware and Software installation, and User Training, before the system was launched and went live. Technical and functional support for the system was also done.

**Results and Discussion**

Rapid Application Development (RAD) was started by using the concepts of rapid prototyping approach that gather the essential features of a developed system by using prototype approach. (Fatima, et al., 2014). Prototype model is a software development model wherein it was built, tested, and then reworked as necessary until an acceptable and desired prototype is achieved. By using this prototype, the client can get an "actual feel" of the system, since the interactions with prototype can enable the client to better understand the requirements of the desired system. Some of the menus used in career placement system are home, library, photo, resume, form and logout. If the student is new user, student must register in the system first to be able to log in using his student number as basis for his registration and create his own password. The student can now input his data to be able to create his resume such as personal information, educational background, achievements and seminars and trainings. The student may update his file from time to time. As for the library and photo, this is where the student can upload his picture or file which can serve also as data bank for his files wherein he can upload his certificates on training attended or awards. The form menu is where the student can preview his resume and print once he is done to submit his resume in his chosen company for a job. (Maulany, et al., 2021). The method developed in designing e-learning applications is to use a method that is generally used in the development of information systems using Rapid Application Development.

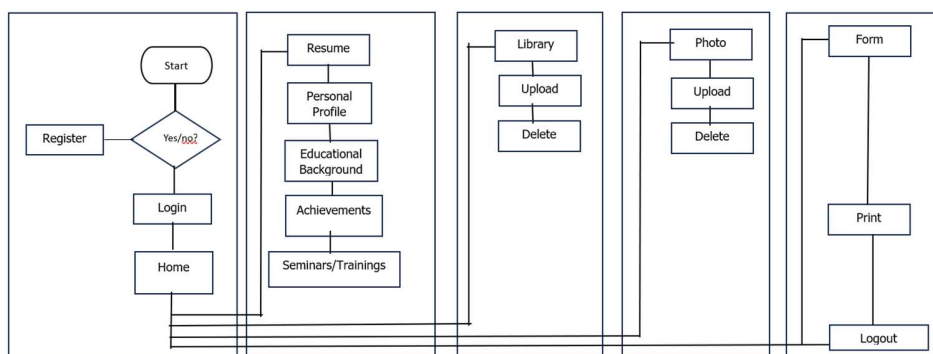


Figure 3 Flowchart of Career Placement System

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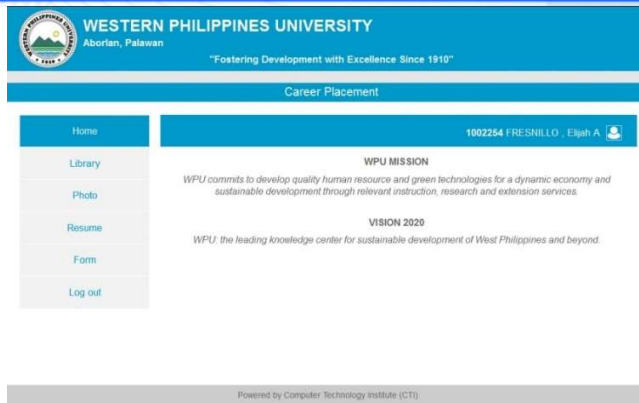


Figure 4 Main Menu of the System

Once log in, the home page will display the different menu where the user can choose from. If the user chooses to select a menu, the menu he selected will display different page.

The Main Menu of the system which allows the student to view and select different menu.

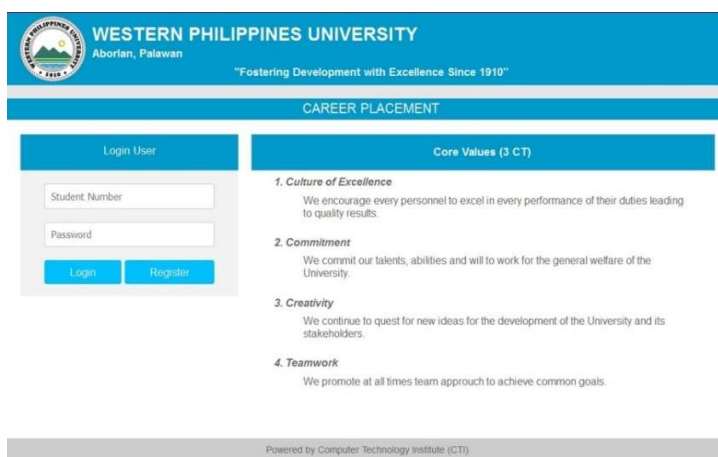


Figure 5 Logging In

The login button allows to user to log in or register in the career placement system. If the student has already an account, he may choose the login button.

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Career Placement

Home 1300550 RAGADIO, Kenneth Cyles D

Library  
Photo  
**Resume**  
Form  
Log out

**Personal Background**

Select Gender: [Dropdown] Select Course: [Dropdown]  
 Select Status: [Dropdown] Specialization: [Text]  
 Home Address: [Text] Mailing Address: [Text]  
 Date of Birth: Month: [Dropdown] Day: [Dropdown] Place of Birth: [Text]  
 Ethnic Affiliation: [Text] Mobile Number: [Text]  
 Dialect Spoken: [Text] PO Box: [Text]  
 E-mail Address: [Text]

Spouse  
 First Name: [Text] Last Name: [Text] Maiden Name: [Text]  
 Extension Name: [Text]  
 Number of Children: [Text]

[Next Page](#)

Figure 6 Resume

This menu allows to user to fill up or update his personal information. The student may opt not to fill other information in his resume and still can proceed with the next page if incomplete.

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CAREER PLACEMENT

**Login User**  
 Student Number: [Text]  
 Password: [Text]  
[Login](#) [Register](#)

**Register**  
 Student Number: [Text]  
 First Name: [Text] Middle Name: [Text] Last Name: [Text] Ex. Name: [Text]  
 Gender: [Dropdown]  
 Password: [Text]  
 Re-type Password: [Text]  
[Submit](#)

Powered by Computer Technology Institute (CTI)

Fig. 7 Registration

This is the display menu for the registration wherein students are required to use his student number to be able to create his account to ensure he is enrolled in the University and may set his own password. First name, Middle Name, Last Name and Extension name is required in this field and the gender to match and ensure that it is his own student number. Once registered, user can now select login button to create his resume.

The actual printed resume that the student can use for his application is removed from this paper in view of the sensitive data and personal information of the student. All the information inputted in the career placement system



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are displayed there. If the student's information is incomplete, the printout form for student's resume will also be incomplete and will not be displayed.

## Conclusion

Based on the research conducted, the objectives of the system were successfully achieved since it is currently being used and deployed and used at the Career Placement Office in Western Philippines University Main Campus by applying the Rapid Application Development method through four (4) phases namely: build, design, trial, and live phase. Its main purpose it to be able to create a system that generates resume that can be use by the student when applying for work which was achieved by the system. Career Guidance is conducting a Job Fair sometime in March every year giving an opportunity for non-graduating/graduating students to apply for work. By using the system, student can also store their files and update their information from time to time. With the aid of the system, printing of resume for future use will be easy. The system has different modules available for students. The system allows the system administrator to manage account of students by viewing, updating, searching, deleting account. In case the student forgot his/her password he/she may approach the administrator for password reset.

## Recommendations

By having a career placement system student may save time and effort conveniently without having the need which may add stress to them when thinking for the proper format of a standard resume or applying for work. Through this system, they just need to fill-up the information needed and afterwards, they can print and use the system generated resume when looking for job. They can store and upload their files by having a library module in the system and update their personal information from time to time. But since the system is still in Web based (Offline), the researchers may opt by uploading the system on-line allowing the students to still access and update their files for future use. The researchers recommend to test the usability metrics of the system using the ISO/IEC 9126-4 Metrics or Davis 1989 technology acceptance model (TAM) instrument.

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148



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