TRAINEE GUIDE- INDUSTRIAL ACADEMIC COOPERATIVE TRAINING WEB SYSTEM

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ABSTRACT

This study is documenting the development process phases of the Trainee Guide -Industrial Academic Cooperative Training Web System. It is a web system for used by college students who are interested about cooperative training or internship opportunities. The main problem was that college senior students who are planning to do coop training in their final year at college are having difficulties choosing the best place to do their training. So, the proposed system is designed to contribute in enabling improvements in students' decision making process where the students will be able to make a well-informed decision based on former student's experiences through reviews, discussions and previous ratings. The main objectives of the web system are to provide guidance for all Saudi Arabia college students who are in the stage of looking around for cooperative training opportunities and to be a destination for these students who are in a need for guidance and counselling regarding their training options. The web system has been developed using XAMPP Server, Bootstrap, Laravel Framework and Atom editor. The programming languages used is PHP, HTML, CSS and JavaScript.

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KEYWORDS: Agile Methodology, Cooperative Training, Senior Students, Yanbu University College, Laravel Framework

1. Introduction

Recognizing the importance of achieving maximum compatibility between college graduates' skills and the skills required by the labour markets, Saudi Arabia colleges started to work on the application of cooperative education system which combines formal education with the real work environment experience that is relevant to the student's college specialization and his/her education curriculum. As such, it is a good way for the trainees to gain experience in an orderly manner within the time of their theoretical studies without prejudice to its basic requirements or increasing the years of study. Cooperative education is an advanced way of applied education.

1.1 Problem Statement

College Senior Students who are planning to do coop training in their final year at college are having difficulties choosing the best place to do their training. Since this place must meet many requirements, requirements set by the college itself, personal requirements, social requirements and sometimes the student will in addition need to check whether he/she meets the workplace's own requirements for students. Relying on luck only or on one person's opinion can lead to serious consequences. These consequences can range from the supervisor at work not knowing anything about your college specialization to quitting the training course in the middle of the semester due to difficulties and problems accruing at the work place. Mainly, these problems had actually originated from a gap between student's expectations and workplace reality.

1.2 Objectives

1. Encourage students to write full reviews about the companies they finished their training at with complete honesty and objectivity concerning the work place environment, relevance of the tasks to the education program and supervisor's willingness to train, motivate and help students in their first work experience.

2. Provide guidance for all Saudi Arabia college students who are in the stage of looking around for cooperative training opportunities in the Kingdom and to be number one destination for all students in a need for guidance and counselling regarding their training options and this service is an integral part of the

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website's mission. To facilitate the process of choosing the most appropriate company that suit the student's condition, specialization and requirements.

3. One of the website objectives is to help in the decision making process forchoosing the right place, if the right decision is made then this will enhance the chances of achieving the cooperative training goals for all the parties involved in the experience(student-college-employer).

1.3 Scope

This project involves the design and development of a web site for use by college students who are interested about cooperative training or internship opportunities. The project aims to address the genuine reasons why senior students in colleges are having hard time deciding about the place to do their cooperative training, where they can have a real work experience that as effective and successful as it should be. The website is designed to contribute in enabling improvements in students' decision making process where the students will be able to make a well-informed decisions based on former student's experiences through reviews, discussions, ratings and statistical data.

Table 1: Features Provided to Admin and Users

Features Provided to Admin	Features Provided to Users
1. Admin Dashboard	1. Sign up in by email
2. Manage membership	2. Personal profile page
3. Blog Management	3. Writing editable reviews
4. Content Management	4. Participate in discussions
5. Manage reviews	5. Rate the companies based on personal judgment
6. Mange discussions	6. Rate others' reviews
7. Design decisions	7. Search by company name or by locations to view review about the place
8. Contact management	

1.4 Target User

The targeted users of the website are Saudi Arabia college students in all specializations who are required to do cooperative training to get their scientific degree.

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2. Methodology

2.1 Development Process

The Trainee Guide "Industrial Academic Cooperative Training Web System" of the present study was developed by using Agile Model.Each process model follows a series of steps unique to its type, in order to ensure success in process of software development (Agile Model,2010).All agile development methodologies follow a simple cycle through the traditional phases of the systems development process(Dennis, Wixom, &Tegarden, 2010, "a").Therefore,our website development composed of four phases of planning, analysis, design and implementation.

The planning phase is the fundamental process of understanding why the systemshould be built;determine the duration of the system developmentand how the project team will go about building it(Dennis, Wixom, &Tegarden, 2010, "b"). The analysis phase answers the questions of what features should be built for the Trainee Guide- Industrial Academic Cooperative Training Web System and analyses the other similar websites for contents organization of the website.

The design phase is the process of designing functional requirements and user-interfaces, forms and reports that are needed for website development. At the development phase decide the specific programs, database that will be needed for the website development(Dennis, Wixom, &Tegarden, 2010, "c").

The final phase in the SDLC is the implementation phase during which the system is actually built(Dennis, Wixom, &Tegarden, 2010, "d"). The developed website distributed to two of the Yanbu University College Women's Campus faculty members and threesenior students, and asked them to try out the website.

The development of the website was carried out from October 30, 2016 to January10, 2017.

2.2 Survey And Result

2.2.1 Analysis

2.2.1.1 Data Collection

Data collection is the systematic approach to gathering and measuring information from a variety of sources to get a complete and accurate picture of an area of interest (Rouse, 2010). Data collection will enable the developer to answer the questions related to the usefulness and functionality of the website as well as to evaluate the proposed project acceptability and make predictions about future success probabilities.

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Developers founded that the most appropriate methods for the certain case and the method that will produce the best outcome for the study is survey questionnaire. Because it will help the developer in collecting information related to the project scope and proposed web system purposes.

2.2.1.2 Data Collection Domain

The population of this study consists of Yanbu University College Women's Campus students from different specializations: Computer Science & Engineering, Management Information System, Applied Linguistics, Interior Design, Human Resource and Accounting.

2.2.2 Analysis of the Results

2.2.2.1 Students' Questionnaire

An estimated 70 invitations to fill in the e- questionnaire were sent out to a contact list of senior and graduate students of Yanbu University College Women's Campus. Owing to the scale and nature of the contact process, it is impossible to know exactly how many individuals received the request to fill the questionnaire but the final number of responses received was 50 responses. The survey consisted of 15 questions, 13 questions were required and close-ended questions while 2 were optional and open-ended questions. Although developers used random sampling to select the population, developers has ensured that all respondents were senior/graduate student and from various majors. Table 2 shows the summary of students' specialization. Table 3a and Table 3b shows the cumulative questionnaire results.

Table2: Student's Specialization

Category	No. of Respondents	Percentage
Management Information System (MIS)	15	30%
Computer Science & Engineering (CS &CE)	07	14%
Applied Linguistic (AL)	08	16%
Interior Design (ID)	07	14%
Accounting (ACCT)	06	12%
Human Resource(HR)	07	14%

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Table 3a: Summary of Cumulative Questionnaire Results

Question Number	Statement	Level of agreement (%)		
		Yes	No	May be
1	Have you ever used a review site? Such as Amazon, Goodreads, Restaurants review sites.	76%	24%	0%
2	Are you satisfied with coop coordination at your college?	10%	40%	50% (Neutral)
3	Do you know that the head of coop unit will ask you to go and look by yourself for cooperative training opportunity?	80%	20%	N/A
4	Do you face any problems choosing the company to do coop training at?	62%	24%	14% (I have not looked for company)
5	Have you experienced a lack of information about the company you are going to work/worked?	64%	36%	N/A
6	Did you try to reach other students who finished their training at the company to see what their opinion is?	82%	18%	N/A
7	Were you able to reach the other students who did their training at the company you are thinking about doing coop training at?	62%	28%	N/A
11	If you have not done your training yet, do you think you will pay the website a visit before deciding about the company?	68%	30%	2%
12	Would you like it if the website also announces about training opportunities that companies offer?	88%	12%	0%
13	Will you prefer any social sharing features built in (tweet, like, +1, share, etc.)?	78%	14%	8%

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Table 3b: Summary of Cumulative Questionnaire Results

Question Number	Statement	Level of agreement (%)				
		Definitely	Probably	Probably not	Definitely not	Not sure
9	If there is such a website, will you spend your time on writing a review about your experience in the workplace and rate it out of five stars?	50%	36%	0%	0%	14%
10	Will you be a part of community which gathers students who are looking for training opportunities with students who had finished their coop training in order to share opinions with each other?	58%	24%	0%	0%	12%

Websites related to COOP training review were searched at Google in October, 2016. No such websites were found in the kingdom of Saudi Arabia. Hence developers selected the Amazon.com and Goodreads.com social cataloguing websites. The main features of both websites are review, rating, surveys, blogs and discussions.

2.3 Design

System design is a complete document that contains all of the information needed to develop the system.The design and specification provide the necessary information to effectively define architecture and system design in order to give development team guidance on how the

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design of the project should be executed, helping the team work properly. We developed different diagrams such as: activity diagram, use case diagram, context diagram, Data Flow Diagrams (DFDs), Entity Relationship Diagram (ERD), navigation diagram of the proposed website. TheFigure: 1shows the context level diagram of the developed web system.
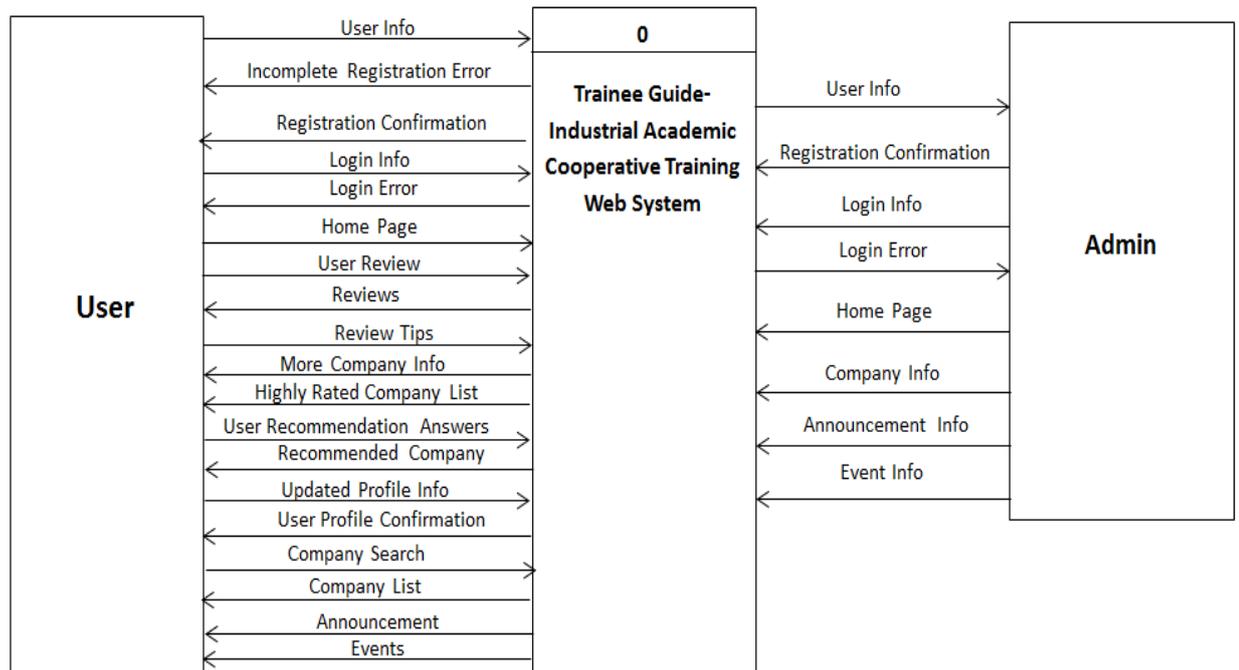
Figure 1: Context Level Diagram

2.3.1 *User Interface Screen*

The developed website was named as Trainee Guide-Industrial Academic Cooperative Training Web System. Some of the user-interface screens are shown in below Figures 2 to 8.

Figure 2: Home Page

Figure 3: Blog Page

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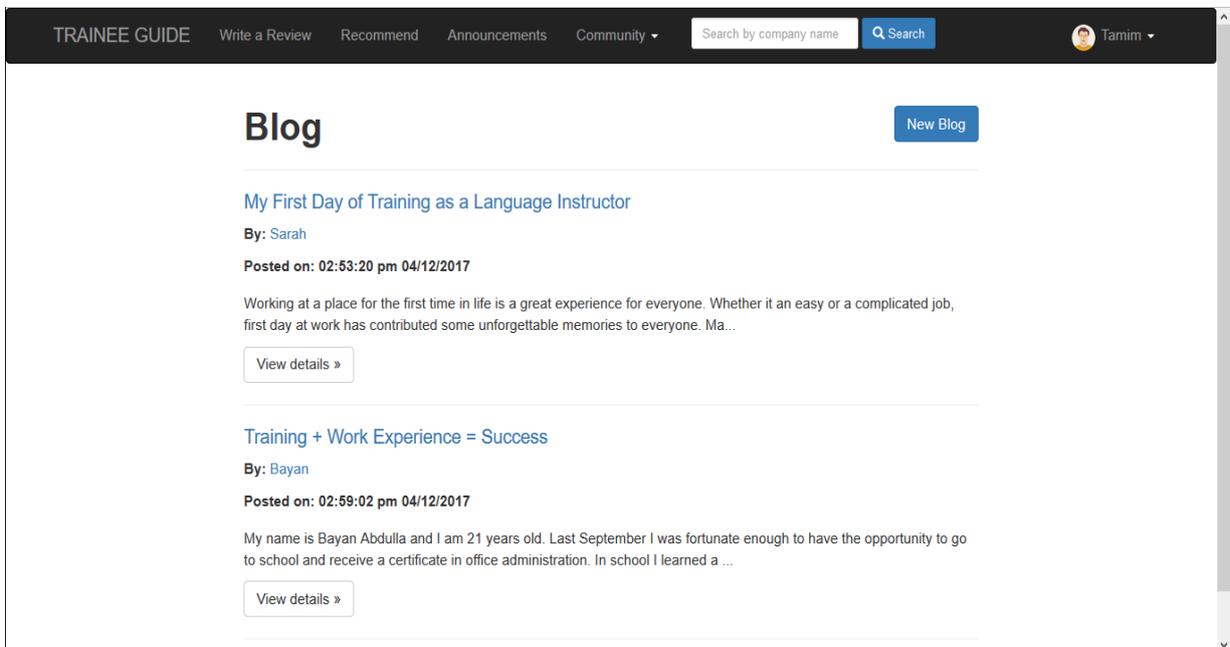
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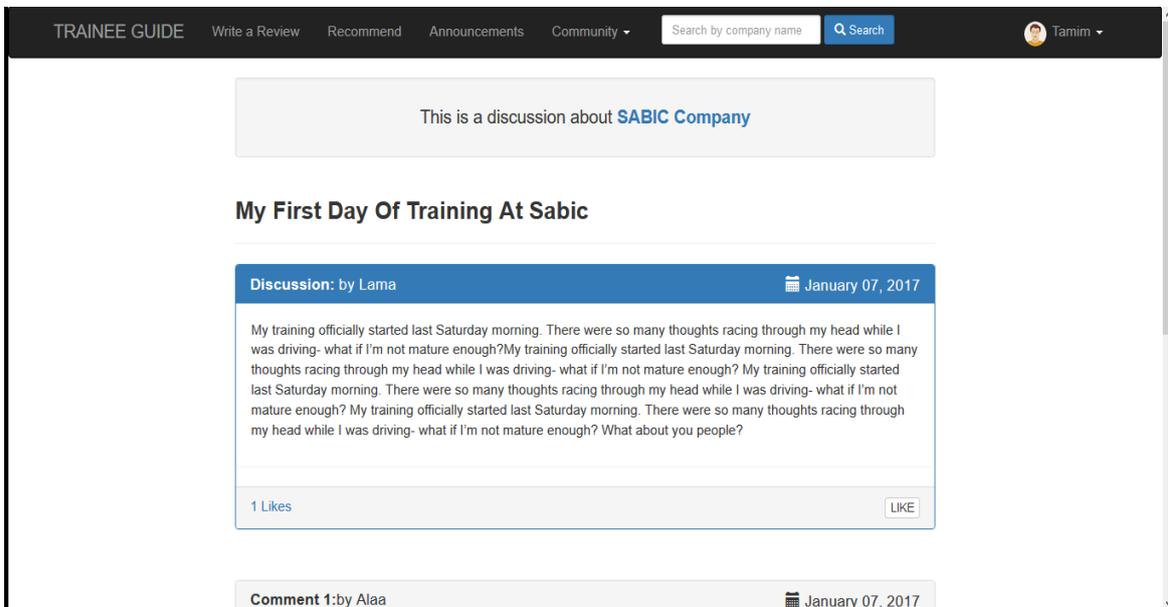
Figure 4: Discussion Page
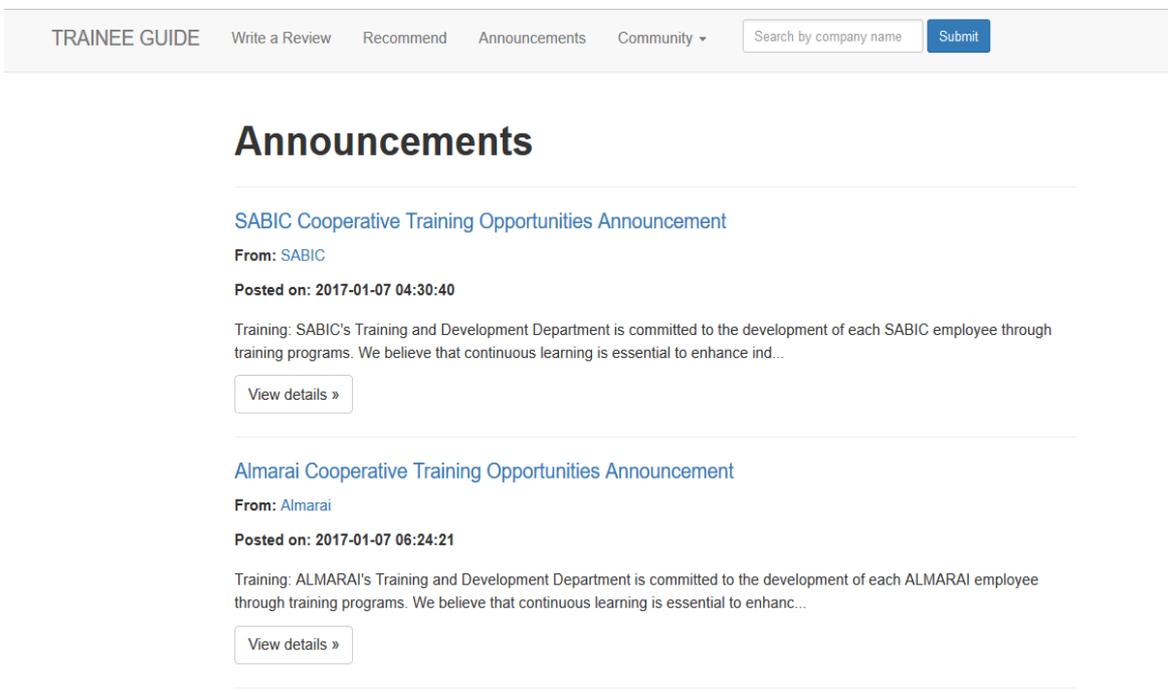
Figure 5: Announcement Page

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Figure 6: Admin Page For Managing Company

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Figure 7: Community Page

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Figure 8: Write A Review Page

3. Conclusion

In this study, the development of the website of the "Trainee Guide -Industrial Academic Cooperative Training Web System" went through planning, analysis, design and implementation phases and a systematic development of the web site was discussed.

Hopefully, Trainee Guide -Industrial Academic Cooperative Training Web System will be one of the resources that help upcoming year's senior students to choose a training work place that meets their preferences.

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