ONLINE COURSE REGISTRATION APPLICATION AT EDEN EVERYDAY ENGLISH BOGOR

Dinda Ayu Muthia\textsuperscript{1)}, Yetrivo Efendy\textsuperscript{2)}

\textsuperscript{1,2)}Sistem Informasi, Universitas Bina Sarana Informatika
\textsuperscript{1)}Kp. Sidamukti RT/RW 005/006 No. 3, Depok
\textsuperscript{2)}Jl. Paledang Lebak Sari RT/RW 01/03, Bogor
Email: \textsuperscript{1}dinda.dam@bsi.ac.id, \textsuperscript{2}yetrivoefendy@gmail.com

Abstract

The course is one of the education provided outside formal (non-formal) schools to develop personal abilities and skills. Eden Everyday English Course Institute is an Institution located in Bogor. In this institution, the registration process for students is done manually by filling in the registration form provided by the admin. Eden Everyday English Course Institute is one of the courses where the number of applicants increases every year; this causes the administration department cannot manage the registration properly and feels overwhelmed so that it is not effective. With the increase in the number of students registering each year, it would be better if a web-based system was created, so that it could simultaneously serve as a medium for promoting the course institution. This research purpose is to build a web-based application to help the registration process for new students in Eden Everyday English Course Institute using the waterfall method. Many studies, especially in the field of information system development, use the Waterfall method. This application improves the quality of information and the efficiency of the use of online course registration.

Keyword: Online, Course, Registration, Web, Application

1. Introduction

English has become a mandatory language for anyone who wants to be successful globally. The increasing flow of people and cross-border communication places English as the social language on the world stage. It is as if an agreement has been reached, that every interaction in the international world will use English [1].

English is the language used to communicate throughout the world. Today everyone must learn and master English in order to keep up with the rapid development of globalization. This was done because English is indispensable in any aspect [2]. Second language is usually the official language or language that is socially dominant and necessary in education, work and other basic needs [3].

This research took place in Eden Everyday English Course Institute, Bogor. In this institution, the admission process for students is done manually by filling in the registration form provided by the admin. Eden Everyday English Course Institute is one of the courses where the number of applicants increases every year, this causes the administration department cannot manage everything properly and feels overwhelmed so that it is not effective. With the increase in the number of students registering each year, it would be better if a web-based registration
system was created, so that it could simultaneously serve as a medium for promoting the course institution.

The software development method used in this research is Waterfall method. Many studies, especially in the field of information system development, use the Waterfall method, such as a research conducted by Tri Hartati, namely the design of an electronic information system for new student registration at language and professional education institute (LBPP) LIA Pramuka, Jakarta [4], online student admission application at SMK Al-Basyariah Bojong Gede [5], and online application for student admission in SMK Negeri 3 Yogyakarta [6].

This research has a purpose that is to create a web-based application to help the registration process for new students in Eden Everyday English Course Institute using the waterfall method.

2. Method

Based on Ian Sommerville [7], Waterfall model have five principal stages, namely as follows:
1. Requirements definition
2. System and software design
3. Implementation and unit testing
4. Integration and system testing
5. Operation and maintenance.

This research only conducts 3 phase of Waterfall model, namely:
1) Requirements definition
   Observations have been conducted in Eden Everyday English to analyze the needs in the course registration system. This is conducted so that when a computerized system is created, all system requirements are met.

2) System and software design
   The author designed an online course registration system with the relationship between the entities in the system described in the Entity Relationship Diagram and Logical Record Structure. As for making object-oriented system design using UML (Unified Modeling Language).

3) Implementation and unit testing
   At this stage, online course registration application is made using the PHP programming language. In addition, unit testing is also conducted through Black Box Testing.

3. Results and Discussion

A. Functional Requirements
   In this online registration course application there are users who have access to the web, namely: Administrator and Student. Both users have different requirements, such as:
   1. Administrator Requirements:
      a. Manage course package data
      b. Manage schedule
      c. Manage Student data
   2. Student Requirements:
      a. Register
      b. Payment Confirmation

B. Database Design
   The relationship between some entity is described in Entity Relationship Diagram. Figure 1 illustrated the diagram.

   Figure 1. Entity Relationship Diagram

Figure 2 depicts logical record structure of the database design.

C. Use Case Diagram
   The design of use case diagram of the proposed system has been depicted in Figure 3.
D. Activity Diagram

This diagram is made based on each use case. Based on “Manage Schedule” use case, activity diagram is depicted in Figure 4.

![Activity Diagram](image)

**Figure 4. Activity Diagram**

E. Implementation

The web of proposed system can be seen in these Figures below. Administrator log in page can be seen in Figure 5.

![Administrator Log In Page](image)

**Figure 5. Administrator Log In Page**

![Administrator Home Page](image)

**Figure 6. Administrator Home Page**

![Student Data Page](image)

**Figure 7. Student Data Page**

![Course Package Data Page](image)

**Figure 8. Course Package Data Page**
F. Black-box Testing

Table 1 depicted the process of black-box testing on administrator’s log in page.

<table>
<thead>
<tr>
<th>No.</th>
<th>Testing scenario</th>
<th>Test Case</th>
<th>Expected result</th>
<th>Result</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Email and password are not filled then click the login button</td>
<td>Email (empty) Pass (empty)</td>
<td>The system will deny user access and display “Please fill out this field”</td>
<td>Compatible to expectations</td>
<td>Valid</td>
</tr>
<tr>
<td>2.</td>
<td>Email is filled in and the password is not filled in or blank then click the login button</td>
<td>Email (<a href="mailto:arang@gmail.com">arang@gmail.com</a>) Pass (empty)</td>
<td>The system will deny user access and display “Please fill out this field”</td>
<td>Compatible to expectations</td>
<td>Valid</td>
</tr>
<tr>
<td>3.</td>
<td>Email on textfield is not blank and password is filled in, and then click the login button</td>
<td>Email (empty) Pass (12345)</td>
<td>The system will deny user access and display “Login Failed”</td>
<td>Compatible to expectations</td>
<td>Valid</td>
</tr>
</tbody>
</table>
Fill in one of the wrong conditions in the email or password then click the login button

4. All fields are filled, except Email field then click the register button: The system will deny user access and display "Login Failed" Compatible to expectations Valid

5. All fields are filled, except Password field then click the register button: The system will display "successfull login" then immediately displays user info Compatible to expectations Valid

Table 2. Black Box Testing on Registration Form

<table>
<thead>
<tr>
<th>No</th>
<th>Testing scenario</th>
<th>Test Case</th>
<th>Expected result</th>
<th>Result</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>All fields are empty then click the register button</td>
<td>Name: (empty) Email: (empty) Pass word: (empty) Address: (empty) Phone: (empty)</td>
<td>The system will display &quot;Please fill out this field&quot;</td>
<td>Compatible to expectations</td>
<td>Valid</td>
</tr>
<tr>
<td>2.</td>
<td>All fields are filled, except Name field then click the register button</td>
<td>Name: (filled) Email: (filled) Pass word: (filled) Address: (filled) Phone: (filled)</td>
<td>The system will display &quot;successfull login&quot;</td>
<td>Compatible to expectations</td>
<td>Valid</td>
</tr>
</tbody>
</table>

4. Conclusion

Based on the discussion that the author has discussed previously, the problem of Course Registration at Eden Everyday English Bogor takes a long time and is less effective. With this proposed system design, it is...
expected to minimize existing deficiencies. So from the system design made the author can conclude as follows:

1. With this online course registration application, it is hoped that Eden Everyday English will make it easier to produce new registrant data reports.
2. This application can make it easier for users to get information, especially prospective new registrants who will register so that it is more effective without having to queue for a long time.
3. This application facilitates registration and payment data processing and minimizes errors.

References


