EMERGING IDENTITY & DIVERSITY OF ART & DESIGN IN SOUTHEAST ASIA
WEB-BASED GALLERY AS PORTFOLIO FOR ART AND DESIGN ACADEMIA

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ABSTRACT

In this urban era there are many college or higher education provide the art and design study program, unfortunately not many of them (college or higher education) think that their students require portfolios when they graduate as expected in professionals world. Nowadays, the digital era has come, there are many documents and things saved and published digitally. Students of Art and Design Study Program can save their works (assigned by their lecturer) in digital form so they have track record as portfolios. There are many ways for the lecturer in grading their students work, and one of its might be using the digital form of their students work. This project will focus on web-based gallery as portfolio for art and design academia, and it is intended for art and design students at Universitas Pembangunan Jaya. This web-based gallery is filled with the products that come from the students works which are described and digitalized. The students can upload their work in digital form that comply the guidance from lecturer to this web-based gallery. The purpose of this web-based gallery is to facilitate the lecturer to describe the assignments and guidance that their students have to fulfill, and facilitate the students to submit their works. Every user who has an account can rate and give comment for every product in this web-based gallery. There are also an opportunity for public to create an account for log in, so they can give comments and rates. Lecturer might use this rating on the students work as one of grading components. The student will have many products that come from their works during their study in Universitas Pembangunan Jaya, so this products with its rates will become the student portfolios. In the future, the whole activity can be control by the lecturer to minimize late of submission and also to ease lecturer to give marks and comment.

Keywords: Web-Based Gallery, Portfolio, Art And Design Academia, Lecturer Assignment

INTRODUCTION

Technology development in particular information technology recently has already progressed very fast, this causes the changes of pattern and behaviour which is called digital, pattern and behaviour. Digital behaviour and pattern have already been applied in professional world, for example a company is looking for a capable employee through the use of information technology. The information required from professionals is Information about the works, information about the projects, and their expertise. Information on the works, projects and expertise of a professional are all summarized in the portfolio.

Art and design students in their lecture activities certainly carry out many tasks assigned by their lecturers. These assignments could be products, studies or projects. Portfolio according to English dictionary Merriam Webster is a selection of a student’s work (such as papers and tests) compiled over a period of time and used for assessing performance or progress, or a set of pictures (such as drawings or photographs) usually bound in book form or loose in a folder (Merriam-Webster, 2017). It means that students actually have many products and works from their college assignments that can be used as portfolio, but so far the their works and products are not kept and recorded in an integrated files or folder. It requires a system that can keep and record student’s works and products in an integrated manner (in this case for art and design students), so when they graduate they will have a complete portfolio and rich of their products and works during their study, so when they graduate they will have a complete portfolio that is rich with their products and works during their study.

![Graphic 1. Modified SDLC stages as system development method](Source: Writers)

METHODOLOGY

SDLC (System Development Life Cycle) is a conceptual model used in project management that describes the stages involved in an information system development project (Professionals, 2017). This SDLC conceptual model is used in the system development of web-based gallery as portfolio for art and design academia. SDLC as a conceptual model for developing information system using six stages, the six stages are:

1. System planning
2. System Analysis
3. System Design
4. Selection
5. Implementation
6. Maintenance
For this web-based gallery as portfolio for art and design academia system, modifications are made to the use of the stages contained in the SDLC as a system development methodology. Modifications of these stages can be seen in graphic 1.

The initial stage is the stage of system planning. At this stage, discussion is made between system developers with system users (in this case the academics of art and design). The next step is system analysis, analysis performed is an analysis of the current system. The result of this analysis then used as reference in system design. In conducting system analysis, system users are involved, facts will be obtained from the users of the system as the basis for database design and their needs as the basis of application design. System design is done by using tools in the form of diagrams and drawing. Diagrams is used as representation of process design and database design, while drawing is used as a representation of visual design (mock-up). Then the stage of system design produces a design which then moves to the stage of system implementation. At this stage of system implementation, the database creation, coding (writing program) for web server and documentation are also done.

After all stages have been done and the implementation system has been applied, so the next step is maintenance the system and for next development that will be start again from the system planning stage.

**SYSTEM ANALYSIS**

Based on the result of user requirements, analysis of the expected system and discussion with system users, there will be some kind of expected users, such as: internal users (lecturers and students), system admin, and external user (guest). For each type of user, it is expected to have different features and authorities. The user (lecturer) after login can create a repository as a container for the tasks he or she provides, then the lecturer writes descriptions and guidelines for the tasks that must be done by students.

The lecturer also can give comments to the student works and afterward lecturer can give a reward in the form of rating to the work that he or she commenting on (see graphic 2). The user (student) after login can upload their assignments, or can comment on other works and afterward they can give a reward in the form of rating to the work that he or she commenting on, or can only give rating to other works.

User (Admin) after login can perform its function as admin, that is to check user data and perform necessary maintenance. On the other hand, the user (guest) and public user (people) who also have the opportunity to view the creations, the works or product of students by visiting the web-based gallery website. In addition, user (guest) is able to give comments and give rating to the work of students that he or she is looking at.

**DESIGN AND DISCUSSION**

UML (Unified Modelling Language) is visual modelling language that help software developer in translating activity into diagram that generally easy to understand. Software developer can use UML as media for clarifying their software design to users (the client), so communication between software developer and users (the client) can run well and clearly. Activity diagram is also one of the diagrams in UML. The diagrams used in graphic 2 and graphic 3 are activity diagram. This activity diagram used by software developer to communicate to user (the client) about what they have capture related to user requirements. Further activity diagram is transformed into use case diagram.

**The Design Of The User Interactions**

Use case diagram is a diagram that illustrate the interaction between users and the system. In the use case diagram can be described various types of users. Each user is represented by a symbol of the person who is then called
login, comment and give rating. Admin, Guest, Student, dan Lecturer are actors derived from user actor, then these four actors automatically can do what can be done by the actor user. In addition Admin can also do maintenance, Student can upload the assignment, Lecturer can create repository for the assignment and describe the assignment.

Use case create repository for the assignment is a representation of activities for lecturers to create a placeholder for the assignment, so that later if the students upload the task, it will be relate to the placeholder for the task created by the lecturer. At the time the lecturer create a placeholder for the assignment, the lecturer will also create a description and guidance of what should be made by the student for the task. Use case Upload the Assignment is a representation of the activities for the students to upload their as a part of the fulfillment of the task giving by the lecturer. The uploaded work must of course be related to the repository the lecturer created for the assignment.

Use case maintenance is a representation of activities performed by the admin for system maintenance, including maintenance for data and managing user data. Meanwhile, use case accessing website and login is for activities as usual as if we access a website, and login into the system. While the use case commenting the creation and rating the creation is a representation of the activity of commenting on the product or work being viewed by user, then it can be continued by rating it. Giving a rating besides can be done during giving a comment, rating can also be done directly without having to give a comment.

**Database Design**

A class is a group of objects that have similar attributes and methods and typically have been put together to perform a specific task (Langer, 2008). Class diagrams are used as diagrams that describe objects with their data and functions that apply to the system. Making a class diagram refers to the use case diagram to estimate what data is required by the system, in addition to the class diagram also refers to the observations made on existing objects in the system. So a class diagram is created by referring to the use case diagram to predict what data is required by the system, other than that the class diagram also refers to the results of observations made on existing objects in the system.

Referring to the use case diagrams and observations made on existing objects in the system, obtained database design in the form of class diagram in graphic 5. The database design is then created into a database containing tables that are translations of the class. Starting from the lecturer create the repository for assignment of students. For AssignmentRepository table, the system will record on the same data record for generated repository and lecturerId taken from the LecturerId. Lecturers are not required to direct any students task being uploaded (in digital form) to the web-based gallery, thus there may be an unallocated lecturerId in the AssignmentRepository table. On the other way a lecturer may direct his students to upload every works of their task to the web-based gallery, thus a lecturer may create more than one assignment repository, so the lecturerId of a lecturer will be recorded more than once in the AssignmentRepository table.

Every time a lecturer assigns assignments to the students, there is a description and guidance of the
task, that's why there is AssignmentDescription table to accommodate description and assignment guidance for each assignment repository. Each assignment is certainly related to the course, for that then there is a relation between the Assignment Repository table with the Course table. Every time a lecturer create an Assignment repository then lecturer should fill in for what course the assignment's.

After the lecturer gives the assignment and notifies that the work of the assignment must be uploaded to the web-based gallery, then the student does his work. After the task is completed and the work is produced then this work is transformed into a digital form, so it can be uploaded into the web-based gallery. The uploaded work then recorded into Creation table and the picture of that work then recorded into CreationPict table. Students can also upload his work which is not the assignment from the lecturer, thus enriching his collection of works on his portfolio. Student works that have been uploaded on web-based gallery then can be seen by user or public. After the user login, user will have the authority to provide comments and provide rating as rewards. Comments and ratings from these users will be stored in the Comment table, while the recapitulation of the rating for each work will be stored in the Rating table.

Input and Output Design

Not all input and output designs can be displayed in this paper, as they are very numerous, for that only a few are displayed, hopefully the displayed picture can help as an illustration (Figure 1). Website visitors although do not have a fixed account they still can browse the works on the web-based gallery. To be able to comment and give ratings, visitors must have an account thus then he becomes a user. There are 4 types of users on the web-based gallery system, namely: admin, lecturer, student and guest. If visitors do not have an account and want to be a user, then visitors can register by clicking the Sign Up link on the login view. In the form register that appears the user fills the full name, NIM (Student ID) or NID (Lecturer ID) if any, desired password, password confirmation, email address, select role (user = guest, student, or lecturer). Especially for the role of student/lecturer visitors must fill the NIM/NID, which will be verified by the admin (Figure 1).

Starting with the lecturer create a repository for the assignment that will be given to the students. After login the lecturer then choose create assignment repository in the menu. Through the create assignment repository form the lecturer will create the repository. Repository ID, Lecturer ID and Lecturer Name will be filled automatically, so the lecturer simply select or fill the course code through Course ID field. After the lecturer chooses the Course ID, then the course name will be automatically filled in Course Name (Figure 2).

After the lecturer click the create button on the create assignment repository form it will appear create assignment description form. In this form the lecturer should fill in the project name in the project name field, write job descriptions on the Description field, due date, and write down the workmanship tasks that must be fulfilled by the students in the guidance field. After the lecturer click the create button on this form then the repository for the task is ready, which then can be read by the students to start doing the task (Figure 3).

After students complete the task in accordance with assignment guidance from his lecturer, students logged on to the web-based gallery and then make the creation on the gallery page by selecting the create and upload creation on the menu. Furthermore students choose which repository will be associated with his work as the fulfillment of the task. After that will appear Create and Upload Creation form on the screen. The Creation ID, Student ID and Repository ID fields will be filled in automatically. The student must write the name of his work, the description of his work and the material used in his work (Figure 4).
work. The Upload Creation Form can also be accessed by clicking the upload button on the creation that appears on the user (student) page, so the student can upload some pictures for his work. In this Upload Creation Form, students click browse button to find the picture to be uploaded. Students must also fill in the name of the picture (e.g.: six view), and write a description of the picture of his work. Students then click the upload button to complete the upload process of his work (Figure 5).

The uploaded student works can then be viewed by all users, so that each user can comment and rate the work. Any comments and ratings made by the user will be stored in the comment table. Furthermore, each rating on a work will be on average as the rating recapitulative the average value of this rating will be stored in the rating table (Figure 6).

CONCLUSION

Based on the results of the process of collecting tasks and student work, the student will have many work records in his portfolio. This Web-based gallery system in addition to helping collect student works as portfolio content, also helps students to get input from various users' comments on his work. Through these inputs students will be able to make improvements in the work. For lecture this web-based gallery can also be used as one component of assessment consideration. Lecturers can include rating their student's work as one of the assessment components. In addition, Lecturers can also know the potential students through the comments given by the student to the work of his friends. Through the comments, it can be seen how the potential of the student (which may be offered a lecturer assistant or as an assistant in research or project)

As a continuation of the development of this web-based gallery system, any uploading process related to course tasks can be controlled by lecturers, thus expect to minimize the number of delay in collecting tasks. In addition to the long-term development, will be lead analysis and design for the web-based gallery system be able to provide lecturer with score recommendatio for the student works, so as to facilitate the lecturer providing final assessment for a course.

References


Merriam-Webster