TASK MANAGEMENT SYSTEM FOR BRAND ADVERTISING ACTIVITY IN SOCIAL MEDIA BUSINESS OF PT TRIBUN DIGITAL ONLINE (TRIBUNNEWS.COM)

By

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ABSTRACT

As a large online news site in Indonesia, Tribunnews.com has many readers every day, and this makes Tribunnews.com have a large of followers on their social media business, for example, on Instagram of tribunnews.com there are 900,000+ followers. This makes many brands interested to do the advertising on the social media business of Tribunnews.com. Therefore, proper management must be carried out to regulate the advertising of various brands to run as they should.

This thesis will discuss the establishment of the Task Management System to manage and control the assignation of the task for brand advertising activity in compliance with PT. Tribun Digital Online (Tribunnews.com) standards. The aspect that will be managed in this system is the delivery of the assignments among all responsible divisions until it gives a report to the client. This system will help to control the delivery of the tasks for every employee in Sales, Marketing, and Design Team and managed by the Head of Advertising.

This system will provide the selection to help every employee choose the right colleague for task assignation. It also has a personal notification to the assignee of the task and reports to check the performance of every employee. So, the time management in the execution of tasks can be well controlled to produce better performance in realizing advertising materials that meet the requirements given by the client.

DEDICATION

I would like to dedicate this thesis for President University,

PT Tribun Digital Online,

My Family,

My Best-Friends,

and My fellow Computizen, especially Information System Students.

ACKNOWLEDGEMENT

First, I wish to express my very deep gratitude towards the Almighty God, Allah SWT for the blessing for me in completing this thesis entitled "Task Management System for Brand Advertising Activity in Social Media Business of PT Tribun Digital Online"

I realize that this thesis cannot be done without the help and guidance of various parties. Therefore, through this chance, I would like to express my sincere gratitude to:

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2. My one and only sister & brother, Bella Putri Aulia and Galang Putra Hartono, and my sister's husband, abang Nirwan who is always listening and give suggestions to me while I think that I could not make it.
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CHAPTER I

INTRODUCTION

1.1 Background

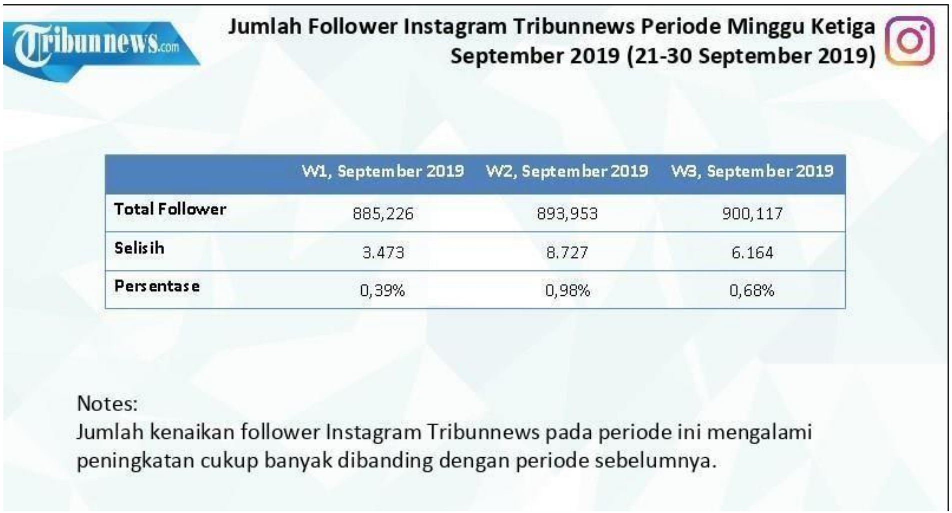
Brand advertising is an advertisement used to create long-term and strong connections with customers. Branded businesses seek to gain long-term positive recognition through the establishment of brand identity, trustworthiness, loyalty and intellectually and emotionally linked prospects to encourage them to take action in the future [2].

The rise of the use of social media today provides an excellent opportunity for advertising a brand, which eventually leads to the term of social media marketing. Social media marketing or SMMs are a form of Internet marketing, where contents on the social media networks are generated and exchanged in order to achieve marketing and branding objectives. Marketing in social media includes activities such as posting texts, uploading images and other content that encourages audience engagement. Tribunnnews.com, through Tribun Bisnis, provides this service to clients to do advertising through Tribunnews.com's social media business.

Advertising on Tribunnews.com's social media is a potential thing for a brand. This is proven because, in outline, Tribunnews.com are:

1. The only national media that has the most comprehensive news network in Indonesia and has the most significant totals of readers.
2. The largest totals of social media followers (For the whole social media business they have) the explanation shown in Figure 1.1
3. The most significant number of Page Views.

Their social media performance to do advertising already attract many clients, it makes the workflow in advertising team crowded enough, so they need improvement through task management system to manage and organize the workflow to get an effective way in meets client's requirements.


Jumlah Follower Instagram Tribunnews Periode Minggu Ketiga September 2019 (21-30 September 2019)

	W1, September 2019	W2, September 2019	W3, September 2019
Total Follower	885,226	893,953	900,117
Selisih	3.473	8.727	6.164
Persentase	0,39%	0,98%	0,68%

Notes:
Jumlah kenaikan follower Instagram Tribunnews pada periode ini mengalami peningkatan cukup banyak dibanding dengan periode sebelumnya.

Figure 1.1 Followers Growth Tribunnews.com [1]

1.2 Problem Statement

The problem statement could be stated on the basis of the above background:

- How to realize the excellent management for the advertising activity in the Advertising Team of Tribunnews.com through a proper way of task management?
- How to get an effective way to communicate among all divisions in Advertising Team?
- How to monitor the workflow in the Advertising Team?
- How to develop the system that could review how long the employee involved in the project to complete their task?

1.3 Research Objective

This research aims at developing a Task Management System for Brand Advertising Activity in Social Media Business of Tribunnews.com. The objectives of the system are:

- Help users to communicate the advertising progress issue among the teams
- Help the Head of Advertising control and maintain the task progress by producing the report
- Help users uploading the advertising content such as draft advertisement and image for visualization
- Provides personal notification that will appear if there is a task for the assignee user
- Provides email notification for the clients if their advertisement is ready to broadcasts.

1.4 Scope and Limitation

The scope of this thesis should concentrate on the following competencies:

- The system is Web-based; it can run on any browsers of the employee of Tribunnews.com.
- The system will focus on the advertising activity of the social media business of Tribunnews.com, such as Instagram and Facebook.
- The system is only for the internal team of advertising, such as the Head of Advertising, Sales Team, Marketing Team, and Design Team.

- The system should be able to manage all activity of the brand advertising such as communicates client requirements, restore the needed data of the clients for the advertising, communicates the delivery of the task among divisions, set up the deadlines for all the task, and restore the component of the advertising.
- The system should be able to send the personal notifications for the assignee employee, and email notification for the clients if the component of advertising already completed.
- The system should be able to provide a report of the delivery assignments for the Head of Advertising so that it could be a Key Performance Indicator for the employee

The system has several limitations to make sure that the system is on track and is not too complicated. Several limitations of the management system, including:

- The system is operating in Tribunnews.com's internal advertising team
- The system will not handle the contract of the advertising includes the payment process.
- The system will not handle the searching of the client candidates; therefore, it only handles the official client that already has a contract.
- The system is only handling the delivery task among division in content preparation until the report for the client if the content already finished

1.5 Thesis Methodology

In order to develop a good quality system, the Rapid Application Development (RAD) approach will be used to design this application. RAD is a form of agile software development methodology which prioritizes rapid prototype releases. The use of software and user feedback by RAD emphasizes strict planning and requirements recording [4]. RAD has five stages or phases that explains in Figure 1.2 which will clarify the following:

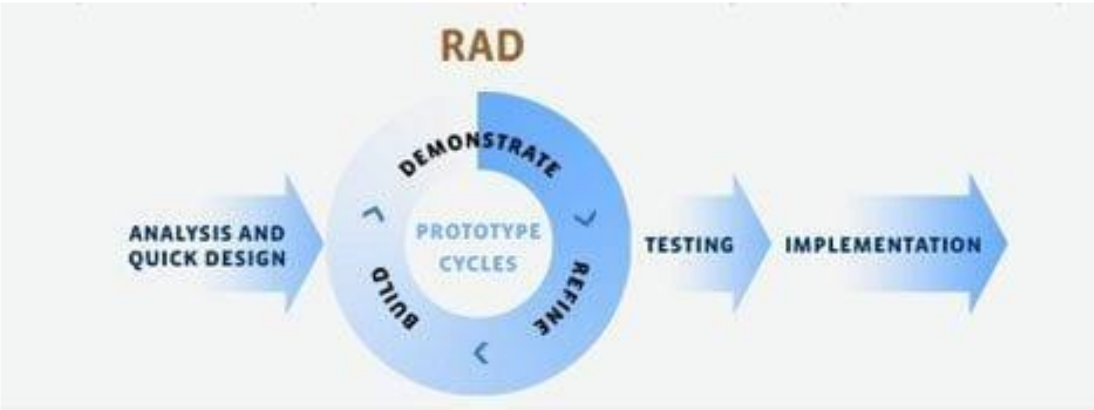


Figure 1.2 RAD Flow [4]

1. **Define and Finalize Project Requirements**

   The client company sits together in this phase to identify, state and finalize project specifications such as project goals, priorities, schedule, and expenditure. After each thing from the criteria of the project has been clearly defined and scoped out, we will be next to the second phase.

2. **Begin Building Prototypes**

   We can start development as soon as the scope and limitation of the project is finished. We will work closely with customers to create and improve working prototypes for the development of design until the final product is ready.

3. **Gather User Feedback**

   In this step, prototypes and beta systems are transformed into working models. Then we collect user feedback to tweak and refine designs and create the best and most relevant products.

4. **Testing**

   In this step, we need to check our software product to ensure that a fully functioning system works together according to customer expectations. Continue to integrate customer feedback as the technology is checked and retested for smooth operation.

5. **Present System**

   This is the final step before the finished product ready to launch. It involves data conversion and user training.

1.6 Thesis Outline

The thesis includes the following seven chapters:

1. CHAPTER I INTRODUCTION

   Introduction Chapter consists of Thesis Background, Problem Statement, Research Objective, Scope and Limitation, Thesis Methodology, and Thesis Outline. The purpose and context of the system developed in this research has been mentioned.

2. CHAPTER II LITERATURE STUDY

   The Literature Study chapter addresses the theoretical knowledge used for such study.Brand Advertising, Task Assignation system, company profile of PT Tribun Digital Online, and the social media business of Tribunnews.com.

3. CHAPTER III SYSTEM ANALYSIS

   System Analysis Chapter explains the system requirements, features, and a little bit of system design architecture of requirements given. This analysis will evaluate the approaches which will be taken by the system developer to build the program.

4. CHAPTER IV SYSTEM DESIGN

   System Design Chapter concerns the design of the system's architecture, data, interfaces, and components in detailed specifications.

5. CHAPTER V SYSTEM IMPLEMENTATION

   System Implementation Chapter includes the development of the user interface, algorithm used, and system code. Relatively to each prototype, the description and summary of this part will converge it to the definitive work system.

6. CHAPTER VI SYSTEM TESTING

   System Testing Chapter contains the application's test documentation. Testing Environment and Testing Scenarios and the results are included here. It is used to analyse and monitor the system in order to detect and fix bugs, faults, and defects before delivery of the program.

7. CHAPTER VII CONCLUSION AND FUTURE WORK

   The conclusion and the improvement of this thesis is described in the Conclusion and Future Work Chapter.

CHAPTER II

LITERATURE STUDY

2.1 Brand Advertising in Social Media

Social media is an online media that allows users to engage, distribute and create content and brand advertising quickly. Social media is a series of web 2.0-based apps that enables the user to fill in their content. Social media features are the message that is transmitted not only to one person but to many others as well. The post appears to be smoother than the other newspapers, as the contact with a lot of users makes it vibrant [5].

Nowadays, companies use these social media as a tool to promote their products so customers would be aware of their brand. On the other hand, not all companies succeed to encourage or to grow awareness about their product in their social media, because of that, many companies use third-party to promote their products such as influencer or the social media business of news company that already has many followers.

Brand advertising in social media is not about the hard sell. It is about building relationships with others that will eventually become the customers or in other words, and it will build customer engagements between customers and the brand. The more engagement brand can build with other people, and the more customer will begin to trust the brand, believe in brand credibility, would like to use the products, and ultimately become loyal customers. That is why to do brand advertising in social media is one of the right choices.

2.2 Task Management System

The methods of the Task Management System are used by p, teams and organisations to help complete the task or mission more efficiently by coordinating the assignment job and prioritizing the associated responsibility to meet the excellent management during the activity completion [6].

Task management system comes in many forms, e.g. basic spreadsheets or applications for online project management. Task Management System helps people to work effectively and reduce waste, to stay organized, to ensure that teams and individuals are used in the right way [6].

2.2.1 Key Component of Task Management System

Task Management System has a key component to meets organize, prioritize, and visualize needs of the user.

a) Organization – Task management system is used to help people, teams, or company stay organized. Part of being coordinated involves setting project goals, visualizing task progress and preparing analyzes or reports to guide potential activities and workflows.
b) Prioritization – A task board allows the user to prioritize the task of the user so that the user can ensure that first the most important things are completed.
c) Visualization – Visualization helps remind users of what they need to do, and helps users understand the whole project. It means Task Management should be easily accessible to all users.

d) Analysis – Task management system generates concrete data that can be analyzed and digested so that end-users can easily understand what they are doing, what they have done, and how things can be done better [6].

2.2.2 Type of Task Management System

Task Management System is represented by a grid system of rows and columns and is commonly referred to as task management boards. Task management system also include indicators or symbols used to describe various tasks or elements of a task. The task management system is represented by a row and column grid system and is commonly referred to as task management boards. Task management system often includes markers or symbols that are used to represent different tasks or elements of a task. These could be anything from images, sticky notes, or just data in a spreadsheet cell [6].

Most of the methods for Task Management System could be grouped into three specific categories:

- Manual Task Management

  Manual task management systems are among the most fundamental aspects of a task management framework. Typically, they're made up of physical items like whiteboards, corkboards or even long stretches of paper attached to walls. Behind these devices there is no virtualization, hence the word manual.

  Being a fundamental system, these kinds of techniques work best for people or teams who perform a small number of seldom changing tasks. Organizations or businesses often use manual task management systems with particular processes because they need less effort and the changes are less frequent or intense. This makes for an easy to modify the flexible system.

- Electronic Task Management

Electronic Task Management offers greater flexibility and performance. Digital or electronic system for managing tasks are not limited to physical space but allow users to add as much or as little information as they want. Such typically include a more comprehensive range of features, such as reporting and analytics. Unlike a manual board, user can take electronic task management tools with them wherever they go with their tablet or computer.

Electronic Task Management usually come in a wide range of ways, from basic spreadsheets to intensive applications for task management. These tools can also be combined with other task and organizational frameworks to develop a complete solution for the management of business tasks.

- Online Task Management

Online task management is particularly useful for teams that take on many projects with different definitions and goals, as well as collaborating with members of working for remote teams. They allow for simple sharing of information, metrics, reporting, analytics, or any other files over an internet connection. Most Online Task

Management works on the internet, so users can assign storage space and backup critical information without overloading their internal networks.

The online task management also provides better communication and collaboration methods for teams. Team members can receive status updates via email using an internet connection or discuss task details [6].

2.2.3 Benefits of Using a Task Management System

The task management system is an efficient method for teams, but it could be used by individuals as well. A task management system helps end-users to work smarter, achieve more success

Task Management System, if properly applied, might:

- Manage and organize workloads – Know what to do and which items are prioritized.
- Increase efficiency and production – Smaller turnarounds in the production cycle are equivalent to applying an optimal amount of resources and time to a task.
- Improve the quality of work – When tasks are organized, and information is used correctly, quality is never sacrificed for production speed.
- Drive collaboration – Teams work better when there is a shared understanding of what needs to be done, and ideas can be easily communicated through a system of a visual task management system.

- Reduce waste – Eliminate time spent worrying about what to do next, or rework projects that were not adequately done on the first attempt.
- Meet deadlines – You and your teamwork more efficiently with an integrated task management system making missed deadlines a thing of the past.

2.3 PT Tribun Digital Online (Tribunnews.com)

City	Monthly Users		
	Tribunnews	Media A	Media B
Jakarta	49,182,631	12,884,671	23,561,221
Surabaya	32,914,398	7,217,742	11,786,659
Yogyakarta	10,941,761	3,015,096	2,575,009
Medan	13,022,820	999,196	5,115,776
Makassar	8,791,811	1,674,800	757,811
Bandung	8,780,883	1,021,858	834,532
Palembang	4,828,436	504,095	3,263,972
Surakarta	2,286,529	753,938	1,131,014
Semarang	2,213,602	378,914	1,815,031
Bekasi	1,815,666	275,883	1,120,967
Depok	1,349,374	163,570	272,344

Figure 2.1 Internet Penetration Comparison in Indonesia [1]

Tribunnews.com is a news website managed by PT Tribun Digital Online, the regional newspaper division of Kompas Gramedia (Regional Newspaper Group). This news site, headquartered in Jakarta, presents national, regional, international, sports, economic and business news, as well as celebrities and lifestyle news. Tribunnews.com also manages online communities and discussion forums via Facebook, Twitter and Google+. As well as being supported by duty reporters in Jakarta, Tribunnews.com is not only supported by a network of 28 regional newspapers or the Tribun Network but also supported by nearly 500 journalists in 22 major Indonesian cities. Tribunnews.com has been born since 2010, and now has Indonesia's most significant local online news network with a considerable traffic figure visualizing the Tribunnews.com area network, the best partner for reaching people in the local city visualized in Figure 2.1 [1].

Tribunnews.com news portal presents the newspaper Tribun Network's electronic paper pages or e-paper. Additionally, there are various rubrics including Tribuners and Citizen Reporters, with these two rubrics the community is expected to participate in conveying ideas in the form of fresh ideas and empirical experiences, in particular, to educate the life of the nation. Tribunnews.com also presents digital paper pages from newspapers on the Tribun Network. Unlike e-paper which is a replica of the print edition, the digital paper is a newspaper which has only been published in digital format online [1].

Figure 2.2 Total Engagement of Tribunnews.com [1]

The large reader community of Tribunnews.com also makes the social media business of Tribunnews.com has many followers; the detail of followers is in Figure 2.2 This kind of issue makes many brands interested to do the advertising on the social media business of Tribunnews.com. Tribunnews.com prepare the team to manage the advertising activity. The advertising activity is handled by the Advertising Division that consists of Sales, Marketing and Design Team, and it leads by Head of Advertising. The Sales team connects and communicates the needs of clients who want to advertise to the Marketing team. The Marketing team must create an appropriate advertisement content and assist by the Design team that responsible for realizing the visualization of the advertisement content [1].

2.3.1 Advertising Procedure

Advertising activity in Tribunnews.com is handled by Head of Advertising, who is responsible to report all of the activity directly to the Board of Director, lead the organization for Advertising division. Under the Head of Advertising, there are three teams who are responsible for all component in advertising which are:

- Sales

  Sales responsibilities are:

  1. Handle and maintain the requirements from the client.
  2. Meets the client directly to explains advertising products and gives consultations which product that suits well into the client's business
  3. Delivering requirements from the client to the other teams, which are marketing and design team.
  4. Control the work result from marketing and design to make sure it meets the client's requirements.

- Marketing

  Marketing responsibilities are:

  1. Deliver requirements of the client from the sales team into the content of advertising.
  2. Provides a caption for social media post that should be unique, interesting, and accordance with the client's branding.

- Design

  Design responsibilities are :

  1. Create and realize the visualization from the client's requirements and a caption that already made by Marketing team.
  2. Create an image that has the power to make our client's customer candidates interested and aware to use the brand.

2.3.2 Advertising Product

2.3.2.1 Facebook

Figure 2.3 Advertising on Facebook [1]

On their Facebook, Tribunnews.com provide the engagement program for their clients through Facebook Quiz or advertising. The team of Tribunnews.com prepare the content of the quiz and upload it to Facebook. The prize is provided by the client to promote their brand, event, application, or program [1]. The example of the quiz will be shown in Figure 2.3

2.3.2.2 Instagram

Figure 2.4 Advertising on Instagram [1]

On their Instagram, Tribunnews.com also provide the engagement program for their clients through the Instagram post. The team of Tribunnews.com prepare the content of the quiz and upload it to Instagram. The prize is provided by the client to promote their brand, event, application, or program [1].

2.4 Related Work

Related Work is a section to discusses a few existing applications, that has a similar concept or related to this thesis application program but having different application features.

2.4.1 Trello

Trello is a software which has a system centered on the user. One of the most attractive interfaces on the market and highly interactive. One of the features of Trello which is one of the popular project management tools is to discuss its unique boards and cards, and unlimited configuration tricks that help support the most complex and specific projects. Moreover, Trello connects individuals and teams and offers a variety of features of social interaction that make collaboration more fun. Just one of the most cost-effective instruments [3].

Figure 2.5 Trello [3]

2.4.2 Basecamp

Basecamp helps in delegating tasks and ensuring that they are well organized. Users can assign tasks, meet deadlines and track progress. This software has ten years experience in the industry and millions of users who enjoy comfortable and succinct operations. Basecamp also has a range of powerful monitoring tools and campfires apps that allow you to use ping and chat in real-time with individuals and groups and reach a rapid consensus for any important decision [3].

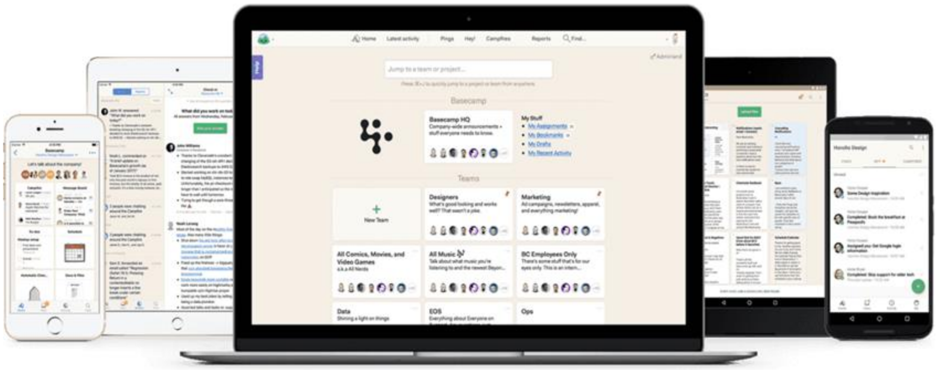


Figure 2.6 Basecamp [3]

2.4.3 Feature Comparison

Table 2.1 shows the differences between Tribun Task Management System and related works.

Table 2.1 Feature Comparison

Application Component	Trello	Basecamp	Tribun Task Management System
User registration & Login	✓	✓	✓
Task Board	✓	✓	✓
Assign Task	✓	✓	✓
Personal Notification	✕	✕	✓
Client Notification	✕	✕	✓
Add Media	✕	✓	✓
Report	✕	✕	✓

CHAPTER III

SYSTEM ANALYSIS

3.1 System Overview

The thesis is intended for two purposes: control the flow management of the task assignation and report all of the advertising activity in Tribunnews.com as the explanation of key performance indicator of the employee. The application is a web-based application. The interface of the application will be simple and easy to use by all users. Features in the application are easily accessible by just clicking the buttons provided in the interface.

3.1.1 Overview of the Current System

The system is currently in the process of following:

1. The Sales team gather the requirement for the advertising needs from the client
2. The Sales team make a brief about the client's need, and send it by e-mail to the marketing team
3. The marketing team create the content of the advertisement and ask the visualization to the Design team and post everything to google sheet doc
4. The design team send the design draft to marketing by email.
5. Once the preparation of the content and the visualization of the advertisement is finished, it sends to the Sales team by e-mail
6. After there is no revision, the Sales team will report the result of advertising to the Head of Advertising and the client

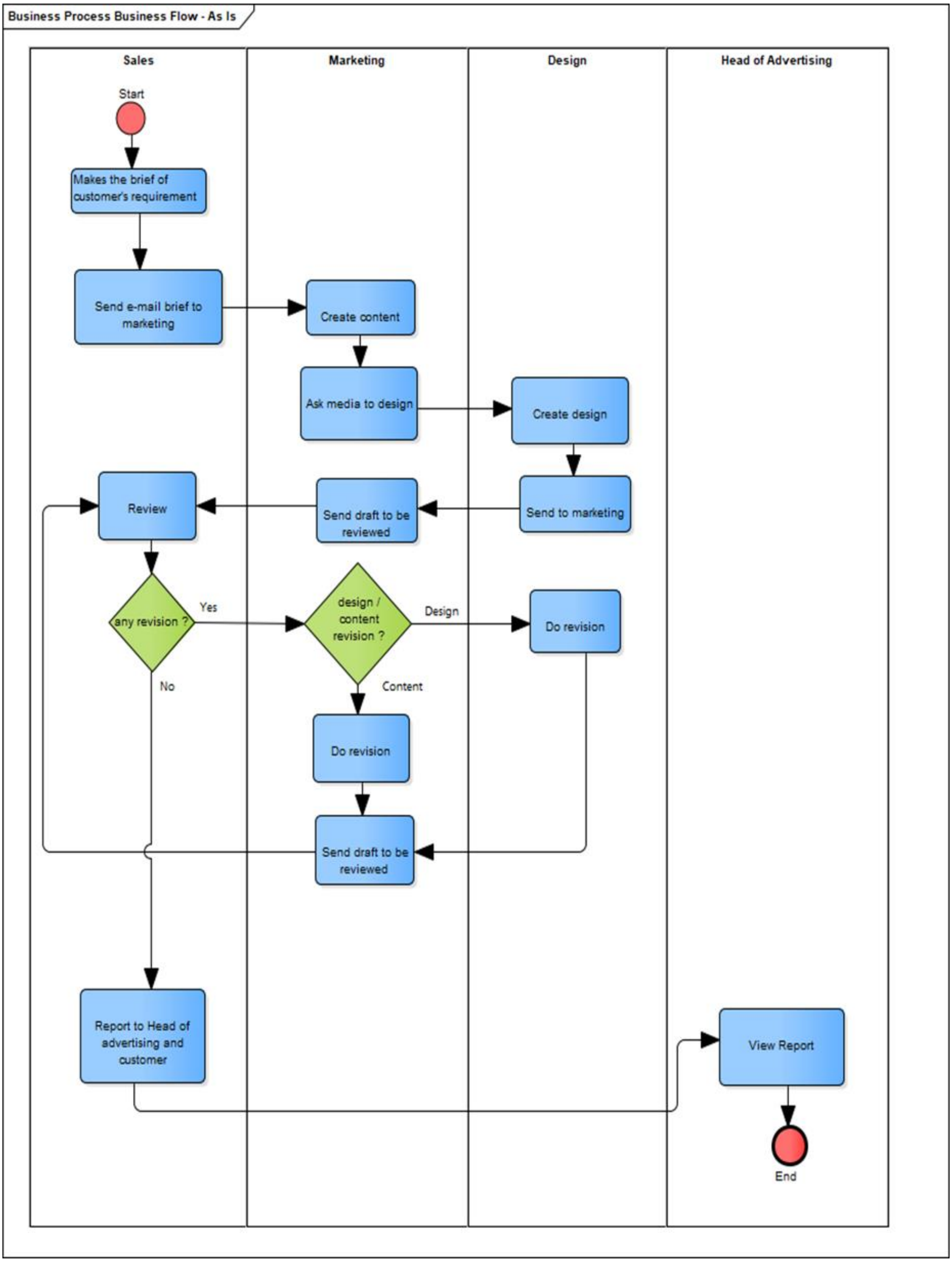


Figure 3.1 Current System Process

3.1.2 Overview of the Proposed System

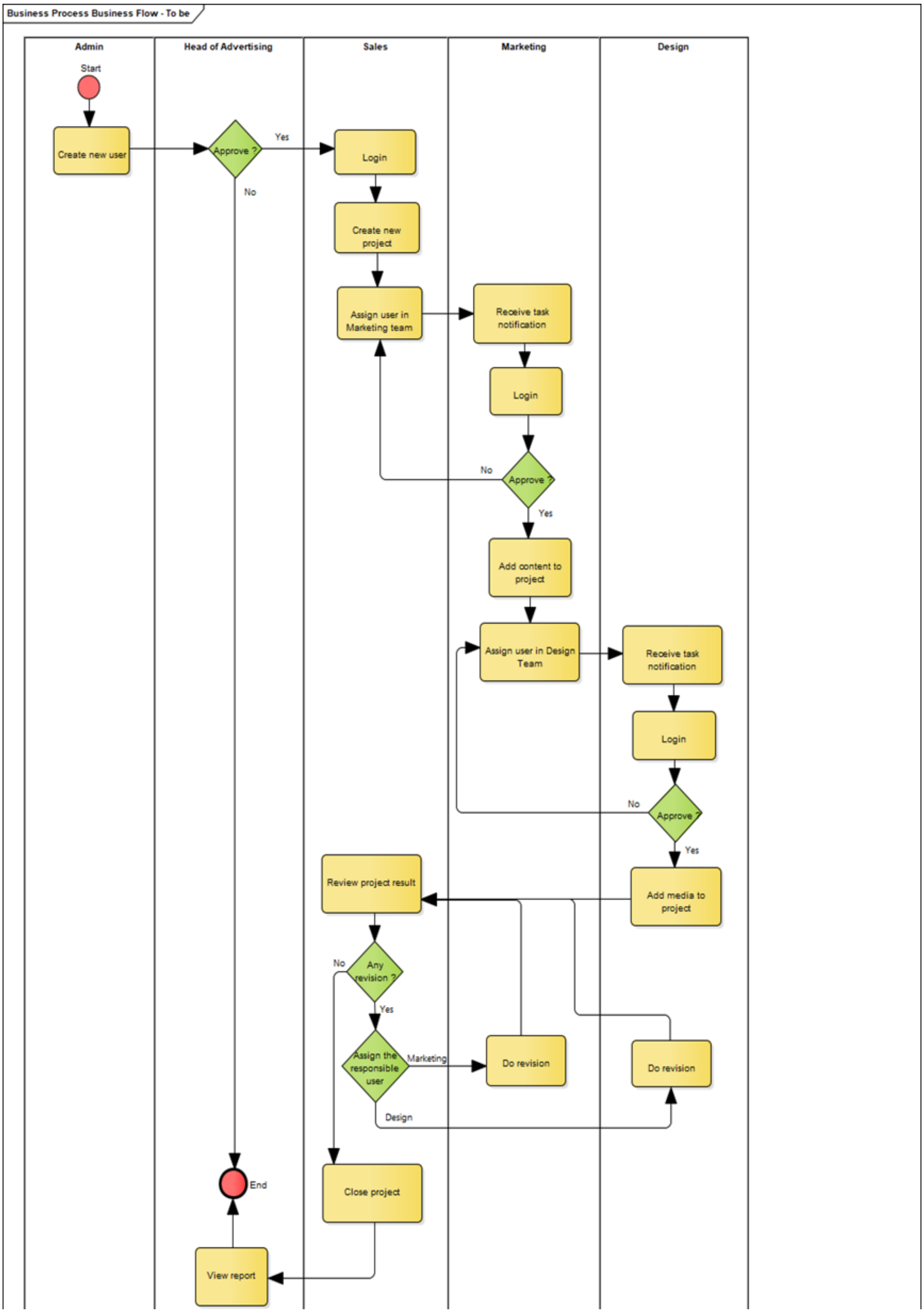


Figure 3.2 Proposed System Process

By using Task Management System, the responsible team does not need the separates e-mail for the component of advertising. The documentation of the entire component could be saved in one place, which is the management system. The delivery of the tasks can be done anywhere by put it in the management system, and the system will send the notification for the assignee user. The system will reveal the progress of the activity on the advertising making process, so it could produce a report to be an evaluation to make the productive process. Clients will automatically receive an e-mail that contains the report of their advertising process once the advertising is already uploaded. All data and information will be stored online in MySQL database. The flowchart of the proposed system will be shown in Figure 3.2

3.2 Functional Requirement

There are several functions which the system provides. The application function requirements are outlined in Table 3.1.

Table 3.1 Functional Requirement

No	Function Description	Details
1	The system should be able to display the assignee task	On the assignee user's page, It will display the task for them (To Do)
2	Admin should be able to manage user account	Admin can create new user, input the form of user detail and delete users
3	The system should be able to store all of the advertising components	All component such as requirement, content, and media needed will be stored in the database
4	User should be able to assign a task to the related user	The system could display the user for assignee candidates

5	The system should be able to give personal notification	The assigned user will be given the task notification to their personal chat
6	The system should be able to give E-mail notification	Once the advertising activity is done, the related client will automatically receive Email notification
7	The system should be able to provide a report	Only Head of Advertising can see the report from advertising activity

3.3 Software Requirements

The software and tools used to develop the system will be:

- Windows Operating Systems (OS)
- Sublime (as source code editor)
- MySQL database
- XAMPP version 3.2.4 to maintain a local server
- PHP version 7.3.12
- Sparx System Enterprise Architect
- Balsamiq to create UI mockup
- Microsoft Word (to create documentation)
- Any browser (Firefox, Opera, Chrome, etc)

3.4 Hardware Requirements

The Computer's specification and performance will determine the development duration and outcome. Hardware specifications used to run and develop the system are provided as follows:

- Laptop/Personal Computer

  Personal Computer is the operating station for the development of this program. This program will be built on a PC running Windows 10 64-bit operating system.

- Smartphone

  Smartphone use to make sure the personal notification functions can be fully functioned. There will be an application to be installed to the smartphone.

3.5 Use Case Diagram

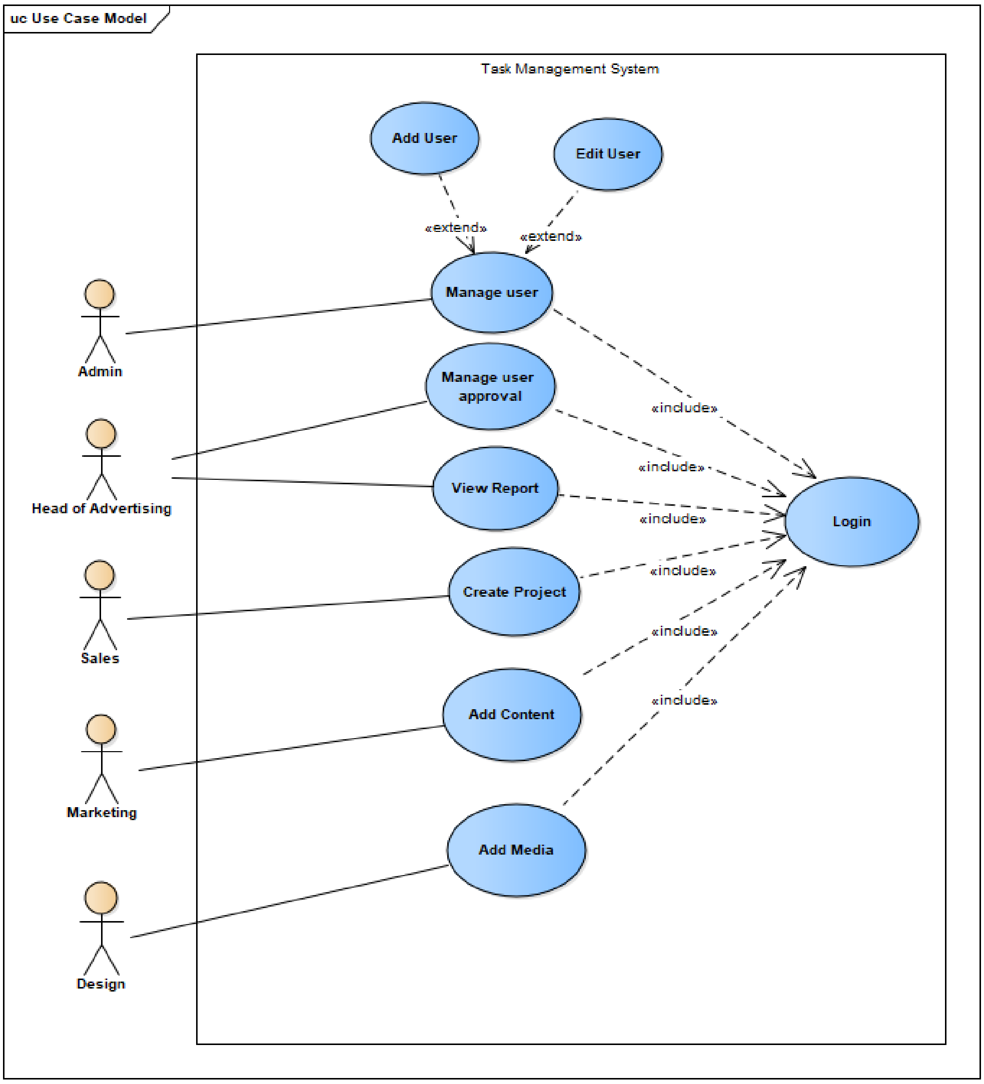


Figure 3.3 Use Case Diagram

Use case diagram is a diagram which describes the modelling level of the system between actors and the system. A use case is intended to define a piece of coherent behaviour without revealing the system's internal structure. Use case typically involves a sequence of the user to system interaction. Use case diagram to define what is happening in the system. The Figure 3.3 shows the use case diagram of the Task Management System. Based on the requirement and the needs, there are five actors called Admin, Head of Advertising, Sales, Marketing, and Design.

3.6 Use Case Narrative

Use Case Narrative is the textual business event description. It explains how the user interacts with the system to make the condition complete. It also describes the details of use case including; use case name, case description, precondition, postcondition, and business rule how to complete process requirement. The Use Case Narrative details will be shown in Table 3.2 until 3.10

Table 3.2 Login

Use Case Name	Login	
Use Case ID	UC 001	
Priority	High	
Primary Business Actor	Admin, Head of Advertising, Sales, Marketing, Design	
Description	This use case describes how user login to the system	
Precondition	User is registered in the database	
Events	**Actor**	**System**
	Step 1: Open the website	**Step 2**: Display login page
	Step 3 : Input registered username and password	**Step 4** : Validate username and password
		Step 5: Check account type
		Step 6: Display landing page
Post Condition	User success login and could access the homepage	

Table 3.3 Manage User

Use Case Name	Manage User	
Use Case ID	UC 002	
Priority	Medium	
Primary Business Actor	Admin	
Description	This use case describes what admin could do to manage user activity	
Precondition	Admin login and already in homepage	
Events	**Admin**	**System**
	Step 1: Go to the admin homepage	**Step 2**: Display table of the user list
	Step 3 : Decide activity (Create user / edit/delete)	**Step 4**: If admin choose to create user, the system will display add new user form
		Step 5: If admin choose to edit/delete user, the system will display edit user form
Post Condition	Admin could do the manage user activity	

Table 3.4 Add User

Use Case Name	Add User	
Use Case ID	UC 003	
Priority	High	
Primary Business Actor	Admin	
Description	This use case describes how admin create a new user	
Precondition	Admin login and already in homepage	
Events	**Admin**	**System**
		Step 1: Display "Add New User" form
	Step 2: Fill the user details form: a. First Name b. Last Name c.Username d.Password e. Division f. E-mail f. Phone Number	

	Step 3: Click the "Save" button	**Step 4**: Validate the required fields
		Step 5: Display "User is waiting for approval."
Post Condition	The request to create a new user is processed and waiting for approval from Head of Advertising	

Table 3.5 Edit User

Use Case Name	Edit user	
Use Case ID	UC 004	
Priority	Medium	
Primary Business Actor	Admin	
Description	This use case describes how admin do update for the user	
Precondition	Admin login and already in homepage	
Events	**Admin**	**System**
		Step 1: Display "Edit User" form
	Step 2: Choose an action : Inactivate user	
	Step 3: Click the Inactive button	**Step 4**: Display "User change is waiting for approval)
	Step 5: Choose an action : Edit User	
	Step 6: Input the change of the user	**Step 7**: validate the required fields
		Step 8: If the fields fulfilled it will display "User change is waiting for approval" but if the fields unfulfilled it will display an error message and user should fill the required fields
Post Condition	The request to create a new user is processed and waiting for approval from Head of Advertising	

Table 3.6 Manage User Approval

Use Case Name	Manage User Approval
Use Case ID	UC 005
Priority	High

Primary Business Actor	Head of Advertising	
Description	This use case describes how the head of advertising manage the approval for the add or update of the user	
Precondition	Head of Advertising login and already in homepage	
Events	**Head of Advertising**	**System**
		Step 1: Display Head of advertising homepage
	Step 2: Select one of the user request list	**Step 3**: Display "Detail User" form
	Step 4:If HoA would like to approve, should click the approve button, if would like to reject, should click the decline button	**Step 5**: If rejected, it will not affect the database, but if it is approved there will be message notification "User updated" and the database will be updated
Post Condition	The update of the user will be saved to the database	

Table 3.7 View Report

Use Case Name	View Report	
Use Case ID	UC 006	
Priority	High	
Primary Business Actor	Head of Advertising	
Description	This use case describes how the head of advertising could view the report of advertising activity	
Precondition	Head of Advertising login and already in homepage	
Events	**Head of Advertising**	**System**
		Step 1: Display Head of advertising homepage
	Step 2: Select the "Report" menu	**Step 3**: Display "Report" page
	Step 4:Hoa could select using a filter which categories of the report to display	**Step 5**: System will display the result based on search criteria.
Post Condition	The system will display the report based on search criteria	

Table 3.8 Create a Project

Use Case Name	Create a Project	
Use Case ID	UC 007	
Priority	High	
Primary Business Actor	Sales	
Description	This use case describes how the Sales team create the project for the first time	
Precondition	Sales login and already in homepage, the project never been created before	
Events	**Sales**	**System**
		Step 1: Display Sales homepage
	Step 2: Click "Create Project" menu	**Step 3**: Display create project form
	Step 4:Fill the project details contains a. Start Date b. End Date c. Client d. E-mail (client) e. Assignee f. Comment (optional)	
	Step 5: Select the assignee user	**Step 6**: System will give the recommendation user based on the task load
	Step 7: Choose user	
	Step 8: Click the "Submit" button	**Step 9**: Validate the required fields
		Step 10: If the fields fulfilled it will display the confirm page, but if the fields unfulfilled it will display an error message, and the user should fill the required fields
	Step 11: Click the "Confirm" button	**Step 12**: Display message notification "Project created, waiting for a user to approve
Post Condition	The task will assign to the user and will be displayed in the "To Do" list of the assignee	

Table 3.9 Add Content

Use Case Name	Add Content	
Use Case ID	UC 008	
Priority	High	
Primary Business Actor	Marketing	
Description	This use case describes how Marketing team add content to their assignee project	
Precondition	Marketing login and already in homepage, the project is in the "To Do" list	
Events	**Marketing**	**System**
		Step 1 : Display Marketing homepage
	Step 2 :Choose one of the list in "To Do"	**Step 3** : Display the project details contains : a. Client Name b. Reporter c. E-mail d. Requirement e. Approve button f. Decline button
	Step 4 : If user reject the project it will dissaper to their "To Do" list, but if user approve it will continue to step 7	**Step 7** : The project will be in "In Progress". There will be notification message "Your project will be on "In Progress"
		Step 8 : Display marketing homepage
	Step 9 : Choose the project in "In Progress" menu	**Step 10** : Display project details with the "Add content" fields that user can attach the content file, it should be on .txt files
	Step 11 : Attach content file	
	Step 12 : Select the assignee user from design team	**Step 13** : System will give the recommendation user based on the task load
	Step 14 : Choose user	

	Step 15 : Click "Submit" button	**Step 16**: Validate the required fields
		Step 17 : If the fields fullfilled it will display the confirm page but if the fileds unfullfilled it will display error message and user should to fill the required fields
	Step 18: Click "Confirm" button	**Step 19** : Display message notification "Content added, waiting user to approve"
Post Condition	User will go back to homepage,the task will assign to the user and will be display in the "To Do" list of the assignee	

Table 3.10 Add Media

Use Case Name	Add Media	
Use Case ID	UC 009	
Priority	High	
Primary Business Actor	Design	
Description	This use case describes how Design team add media to their assignee project	
Precondition	Design login and already in homepage, the project is in the "To Do" list	
Events	**Design**	**System**
		Step 1 : Display Design homepage
	Step 2 :Choose one of the list in To Do	**Step 3** : Display the project details contains : a. Client Name b. 1st and 2nd Reporter c. E-mail d. Requirement e. Approve button f. Decline button
	Step 6 : If user reject the project it will dissaper to their "To Do" list, but if user approve it will continue to step 7	**Step 7** : The project will be in "In Progress". There will be notification message "Your project will be on "In Progress" menu
		Step 8 : Display design homepage

	Step 9 : Choose the project in "In Progress" menu	**Step 10** : Display project details with the "Add media" fields that user can attach the media file, it should be on .png files
	Step 11 : Upload media file	**Step 12** : The assignee user will automatically to the project creator (Sales team)
	Step 13 : Click "Submit" button	**Step 14**: Validate the required fields
		Step 15 : If the fields fullfilled it will display the confirm page but if the fileds unfullfilled it will display error message and user should to fill the required fields
	Step 16: Click "Confirm" button	**Step 17**: Display message notification "Media added, waiting user to review"
Post Condition	User will go back to homepage,the task will assign to the user and will be display in the "To Do" list of the assignee	

3.7 Activity Diagram

In essence, the Activity diagram is a flowchart to represent the flow from one activity to another. An activity diagram shows the various process streams in a designed system, how each flow begins, potential breakdowns, and how the activity finishes. The activity diagram of this thesis is explained in the figure 3.4 until figure 3.12

3.7.1 User Login

The Figure 3.4 shows the login process for all users. The first user opens the website, and it will lead the system to the login page. Users may have their registered username and password entered. The system validates the username and password already exist or not. The program will then check the account if the account is legitimate, whether it is Admin, Head of Advertising, Sales, Marketing or Development. The system will then direct to a landing page based on account type

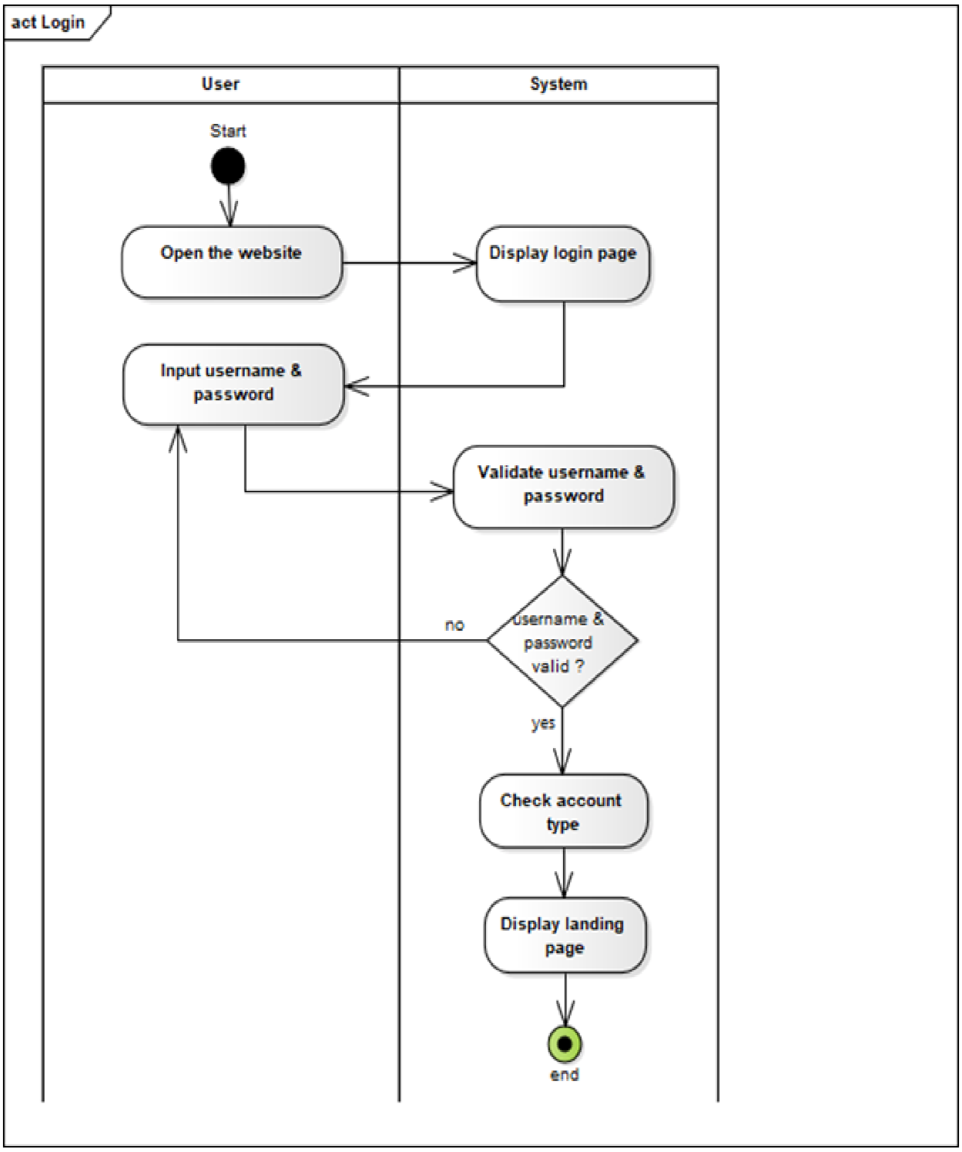


Figure 3.4 User Login

3.7.2 Admin – Manage User

The Figure 3.5 shows the process of manage account for Admin. First Admin should be in Admin homepage. The system will be shown the table of the user list. Admin could choose the action, and if admin would like to add user, admin should go to "Add New User" menu and the system will be displayed the form, but if admin would like to delete/edit the user, admin can directly select the user from the table list, and system will direct to the "Edit User" page.

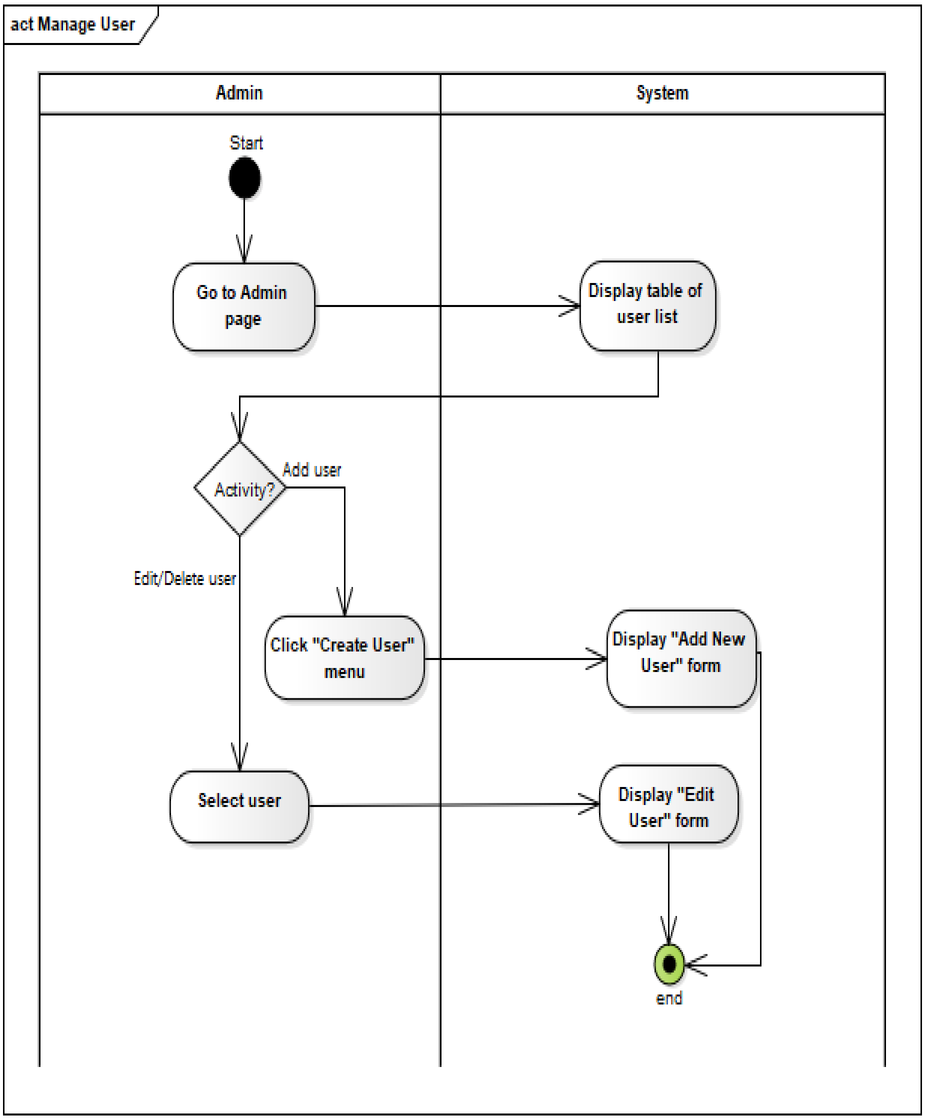


Figure 3.5 Manage User

3.7.3 Admin – Add User

Figure 3.6 shows the process of add user account for Admin. First System displays “Add New User” form. Admin should fill the user detail then after the finish, click the “Save” button. The system will validate the required fields, and if the fields unfulfilled, it will show error message, if the fields fulfilled, the system will show the success message.

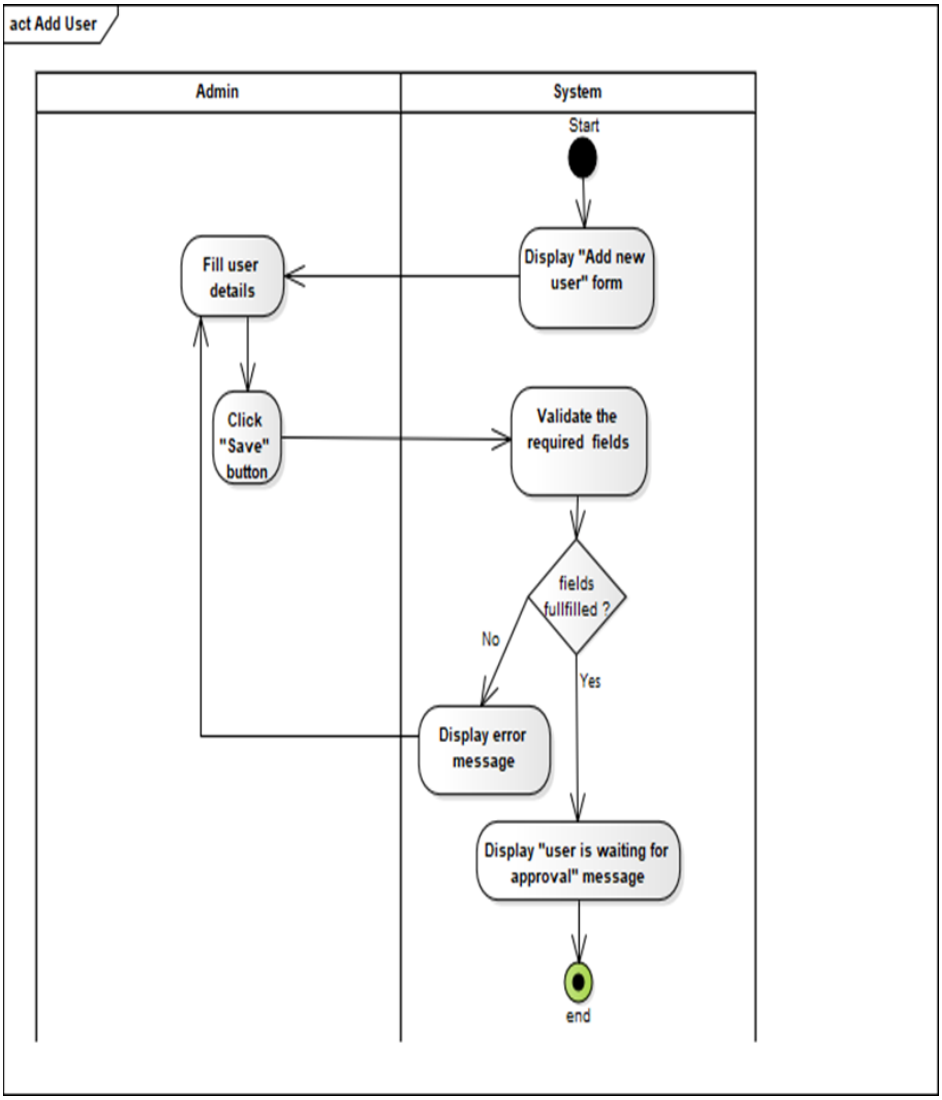


Figure 3.6 Add User

3.7.4 Admin – Edit User

Figure 3.7 shows the process of edit/delete user account for Admin. First System displays “Edit User” form. Admin could choose the action, and if admin chooses to inactivate action, admin should click “Inactive” button then the system will show the “User change is waiting for approval” then wait for the approval from Head of Advertising. If the admin chooses the edit action, admin could directly input the change of the user, then click “Save” button, system will validate the required fields, if the fields unfulfilled, it will show an error message, if the fields fulfilled, the system will show the success message.

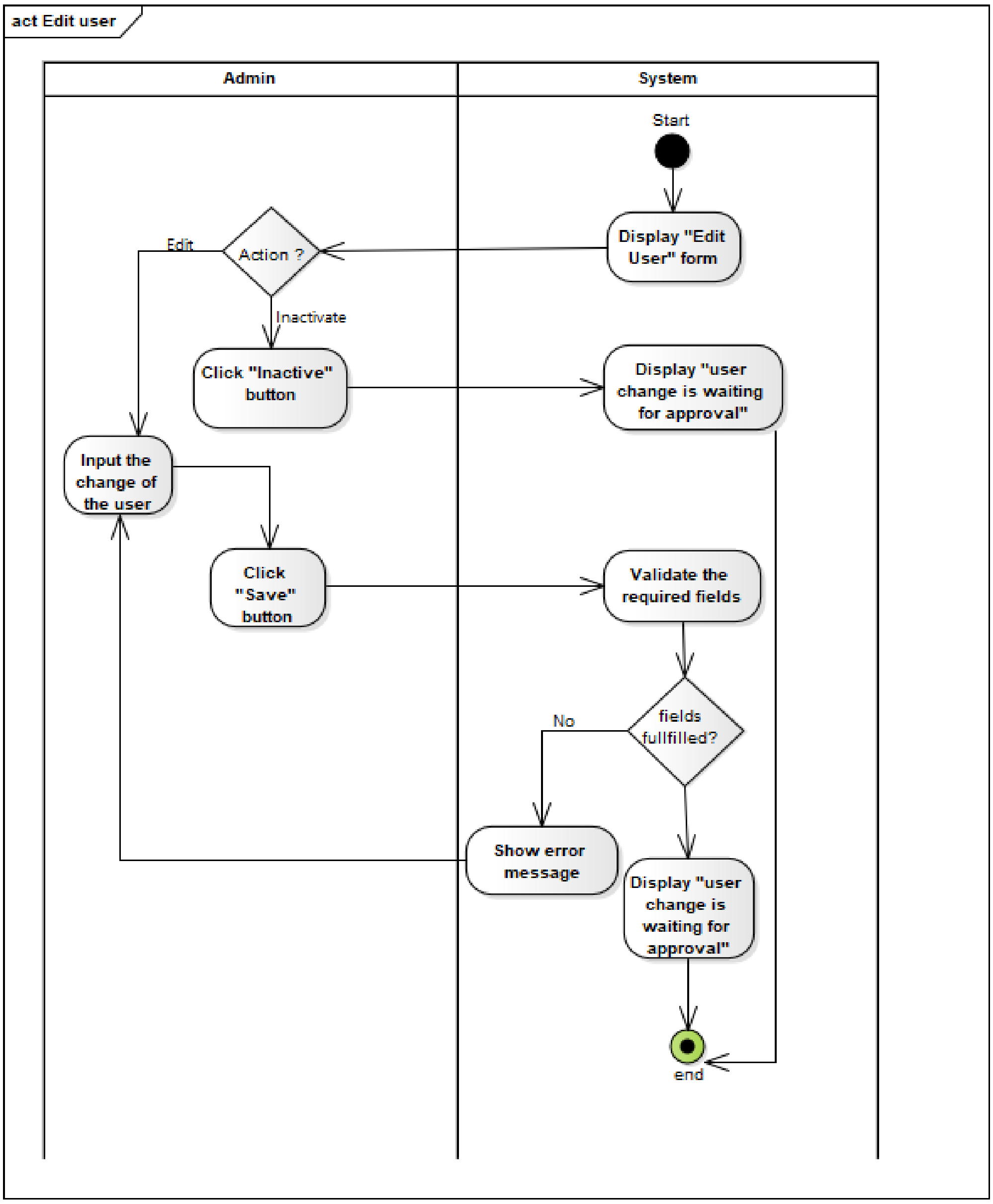


Figure 3.7 Edit User

3.7.5 Head of Advertising – Manage User Approval

Figure 3.8 shows the process of manage user approval for Head of Advertising. First System displays the Head of Advertising homepage. Head of Advertising should choose the “To Do “menu. The system will display the task detail that contains the task about approving add, edit, or inactivate user. If Head of Advertising would like to approve, click “Approve” button and the success notification will show, it will affect the database. If Head of Advertising would like to reject, click “Reject” button, the task will disappear from “To Do” and will not affect the database.

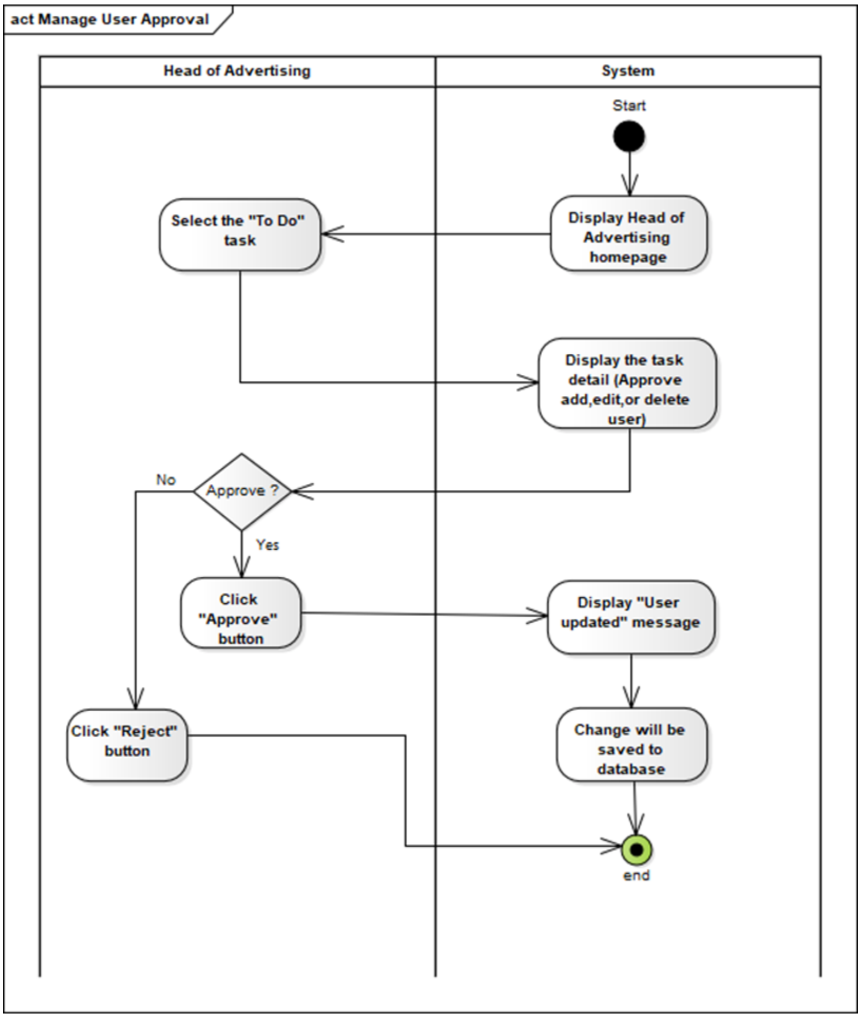


Figure 3.8 Manage User Approval

3.7.6 Head of Advertising – View Report

Figure 3.9 shows the process of view report for Head of Advertising. First System displays the Head of Advertising homepage. Head of Advertising should choose the “Report “menu. The system will display the list of report. There will be fields that the user could input to find the desired criteria, and the system will show the result based on the user's search criteria.

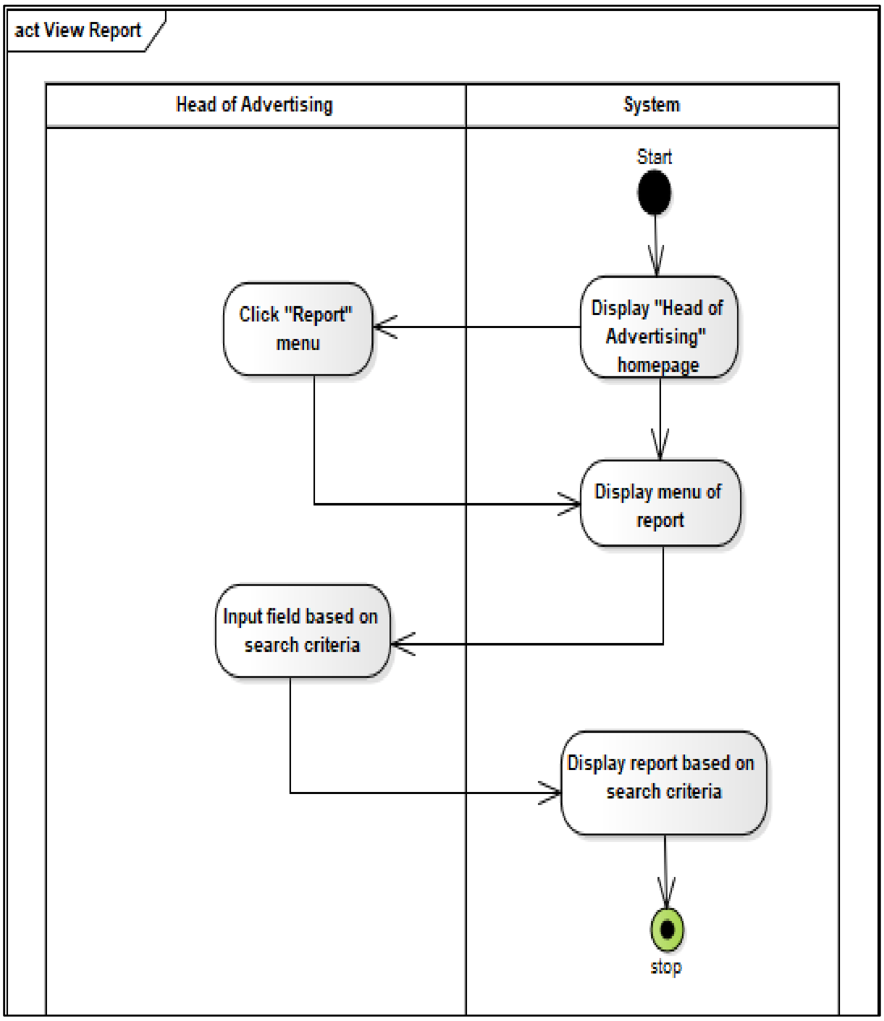


Figure 3.9 View Report

3.7.7 Sales – Create Project

Figure 3.10 shows the process of Create Project for Sales. First System displays the Sales homepage. Sales should click the "Create Project" button. The system will display the "Create Project" form. Sales should fill the project details and select the assignee user, and then the system will display the recommendation user to be assigned based on their team. Once sales select user, click the "Submit" button. The system will validate the required fields, and if the fields were unfulfilled, it would show an error message, if the fields fulfilled, the system will direct to confirm page, sales should click "Confirm" button and the success message will display.

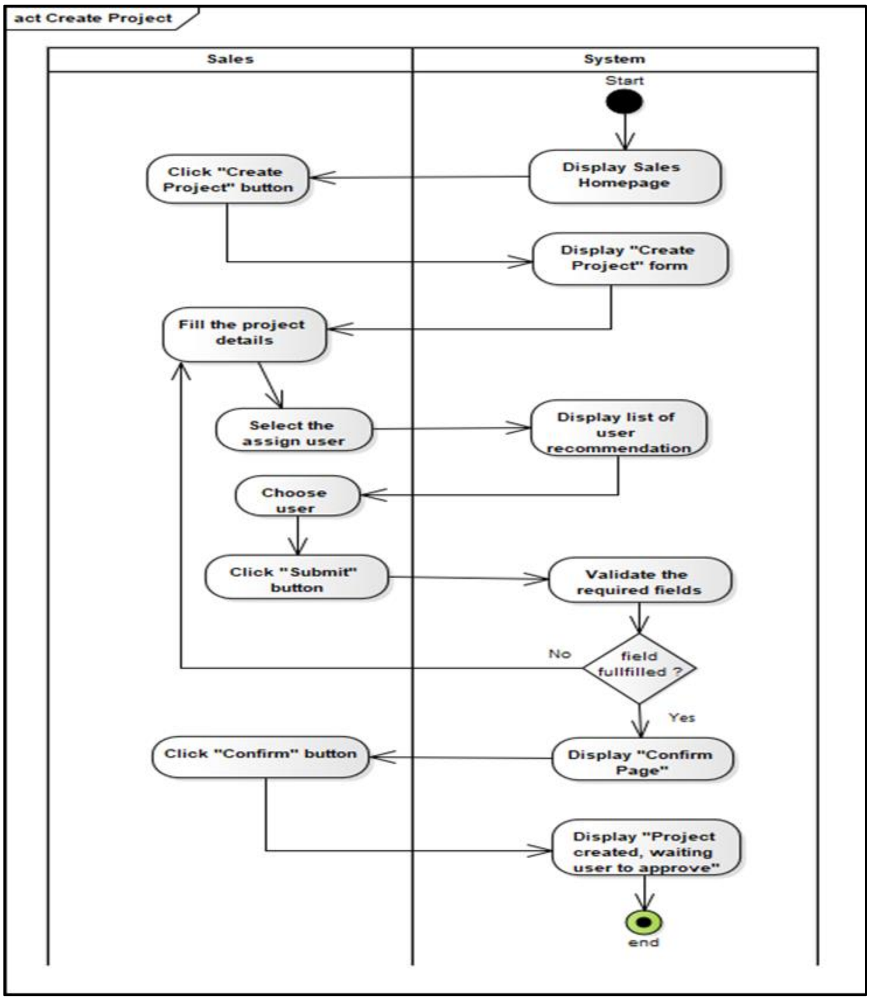


Figure 3.10 Create Project

3.7.8 Marketing – Add Content

The Figure 3.11 shows the process of Add Content for Marketing. First, the system displays the Marketing homepage. Marketing should click a project in "To Do" then System will display the detail of the project. When Marketing would like to approve, marketing needs to click approve button, if reject, click the reject button. Once marketing already approves, the project will be in "In Progress".

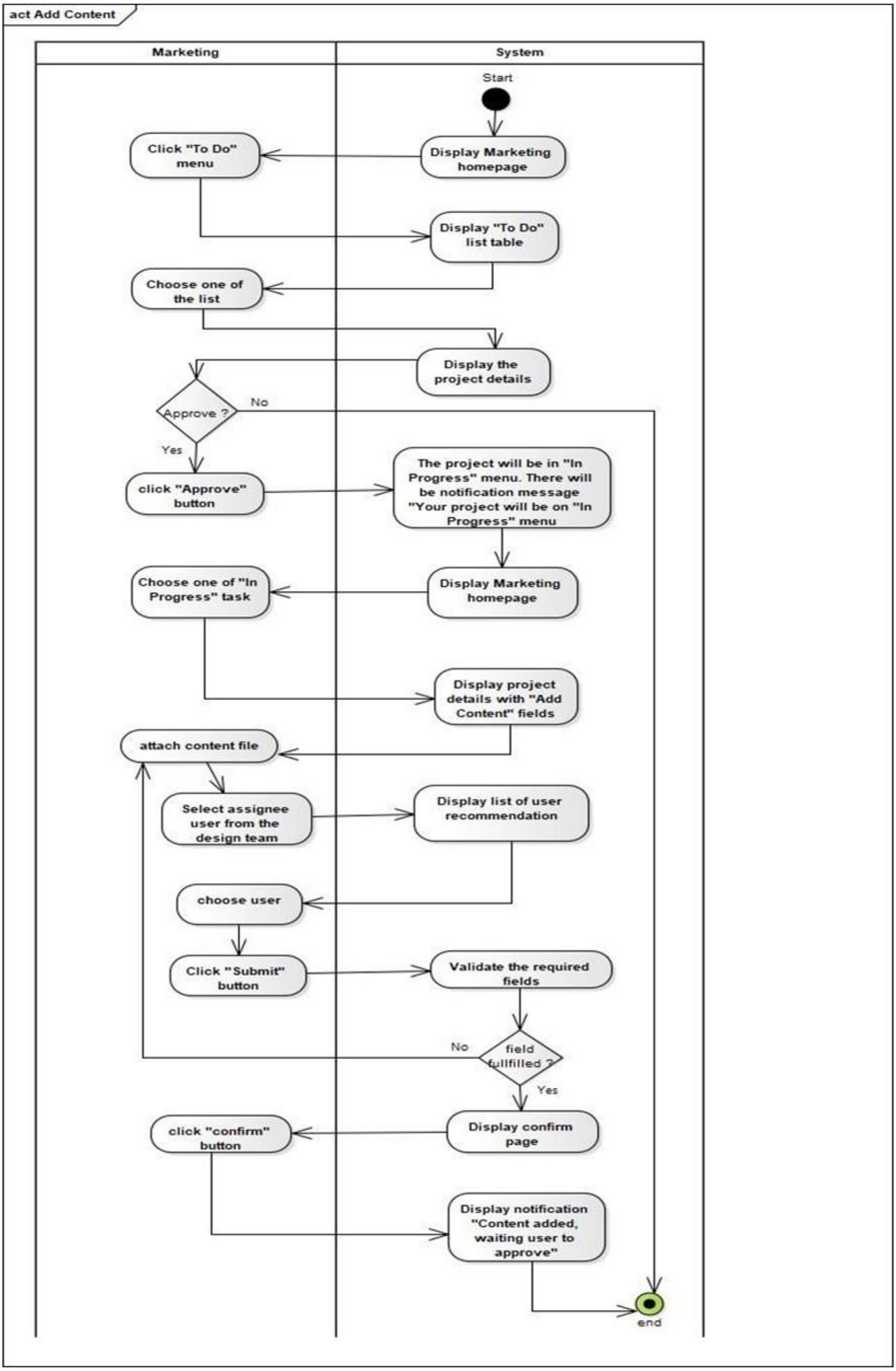


Figure 3.11 Add Content

After marketing chooses the project before, the system will display the project details with “Add Content” fields. Marketing could input the content in the content field and select the assignee user. The system will display the recommendation user to be assigned based on their team. Once marketing select user, click the “Submit” button. The system will validate the required fields, and if the fields unfulfilled, it will show an error message, if the fields fulfilled, the system will direct to confirm page, sales should click “Confirm” button and the success message will display.

3.7.9 Design– Add Media

The Figure 3.12 shows the process of Add Media for Design team. First System is displaying the Design homepage. Design should click a project in “To Do”. When Design would like to approve, Design needs to click approve button, if reject, click the reject button. Once Design already approves, the project will be in “In Progress”, then it will directly back to the Design homepage. After Design chooses the project before, the system will display the project details with “Add Media” fields. Design could attach the content file, and the assignee user will automatically to the project creator (Sales team). Then design click the “Submit” button. The system will validate the required fields, and if the fields unfulfilled, it will show an error message, if the fields fulfilled, the system will direct to confirm page, sales should click “Confirm” button and the success message will display.

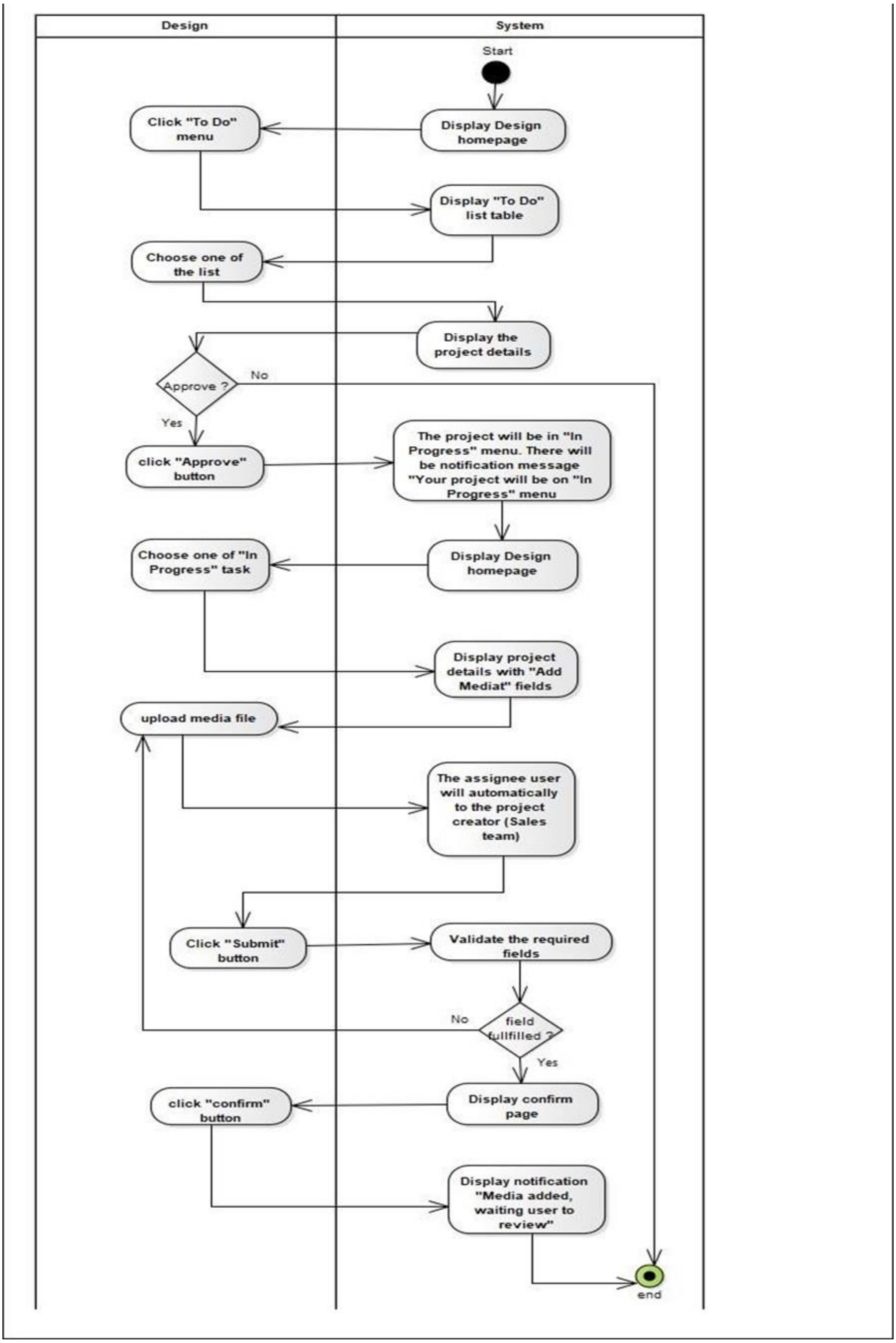


Figure 3.12 Add Media

CHAPTER IV

SYSTEM DESIGN

4.1 User Interface Design

The User Interface Design determines how the system can communicate with the users when using this. The user interface aims to optimize the user experience and to make user interaction as efficient and straightforward as possible. To order to create a system where it is accessible and adaptable to user needs, the design process must incorporate the technological features and the visual elements.

4.1.1 Login Page

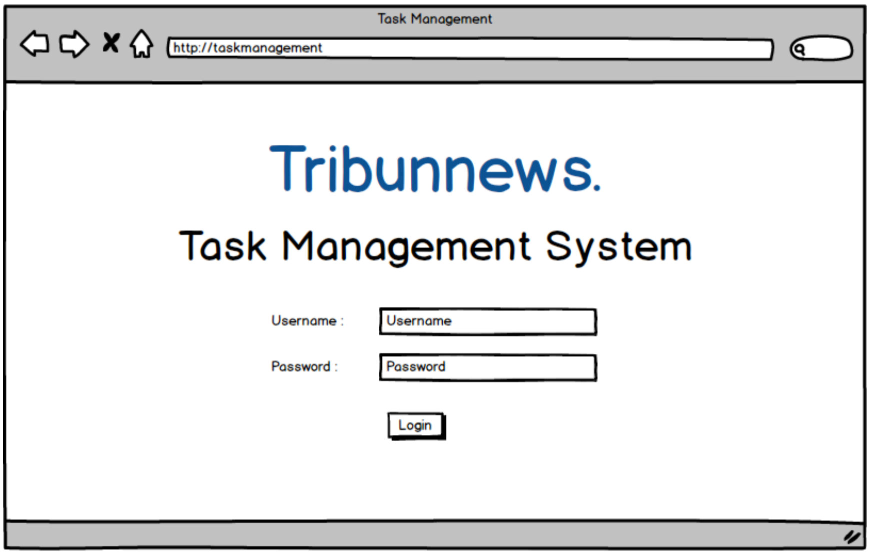


Figure 4.1 Login Page

The Figure 4.1 is an illustration for the login page. This is the first page, all of user will see this page before login into their dashboard.

4.1.2 Profile – Detail

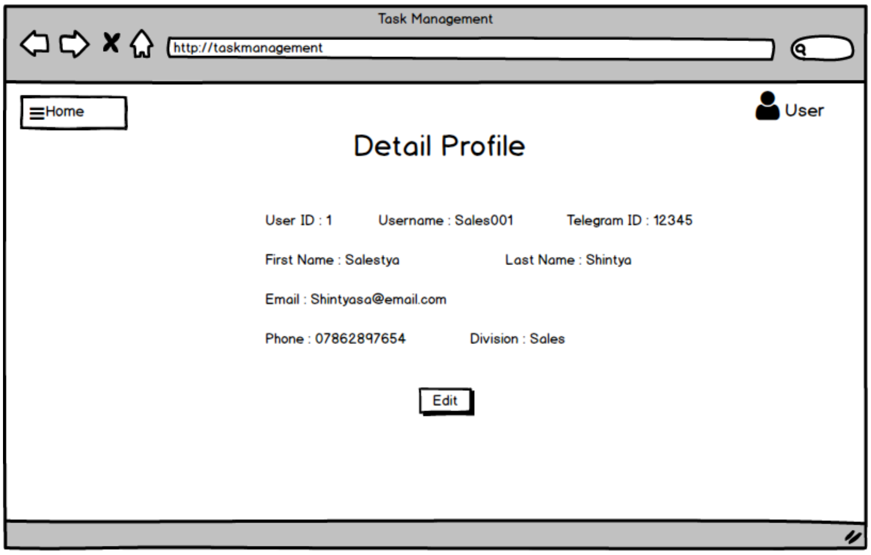


Figure 4.2 Profile-Detail

The Figure 4.2 is an illustration for Profile Detail page. All of the users could see their details of the profile on this page.

4.1.3 Admin – Homepage

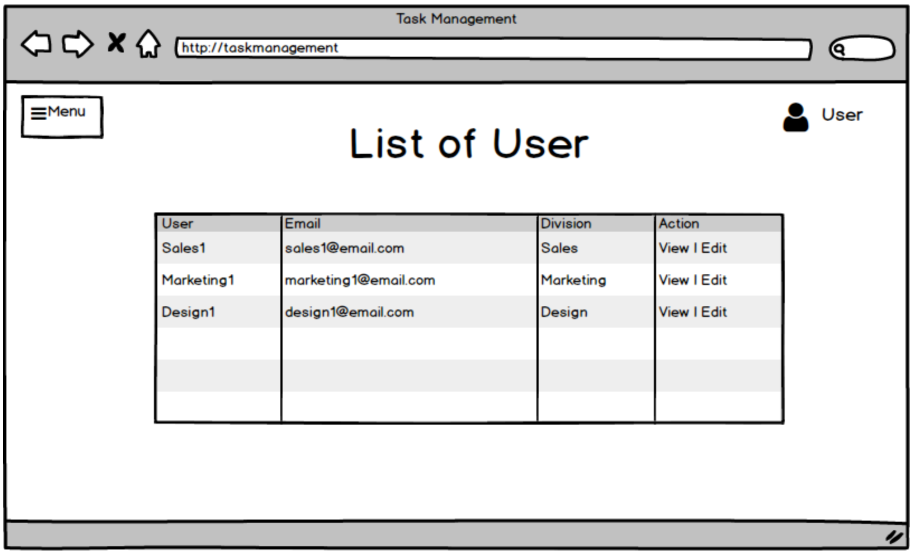


Figure 4.3 Admin-Homepage

The Figure 4.3 is an illustration of the homepage of Admin. On the homepage, admin could see the list of a currently active user. Admin could choose one of the lists to be view or edit user. There will be a menu "Create New User" to enter the add of the user page.

4.1.4 Admin – Create User

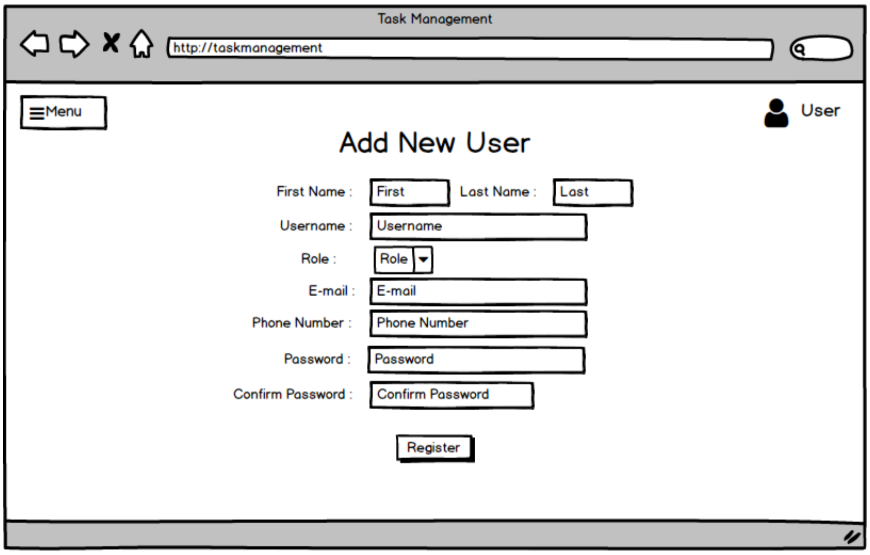


Figure 4.4 Admin-Create User

The Figure 4.4 is an illustration for the Add New User form. This page will be displayed after Admin click "Create User" menu. On this page, admin should fill the data of the new user if admin click "Save" button, the process for user approval will be continued by Head of Advertising.

4.1.5 Admin – Detail User Profile

Figure 4.5 is an illustration for the page if admin chooses one of the lists from User list in the homepage. From this page, admin could directly go to Edit page by clicking the "Edit" button or inactivate user (if the user has been resigned) by clicking "Inactive" button.

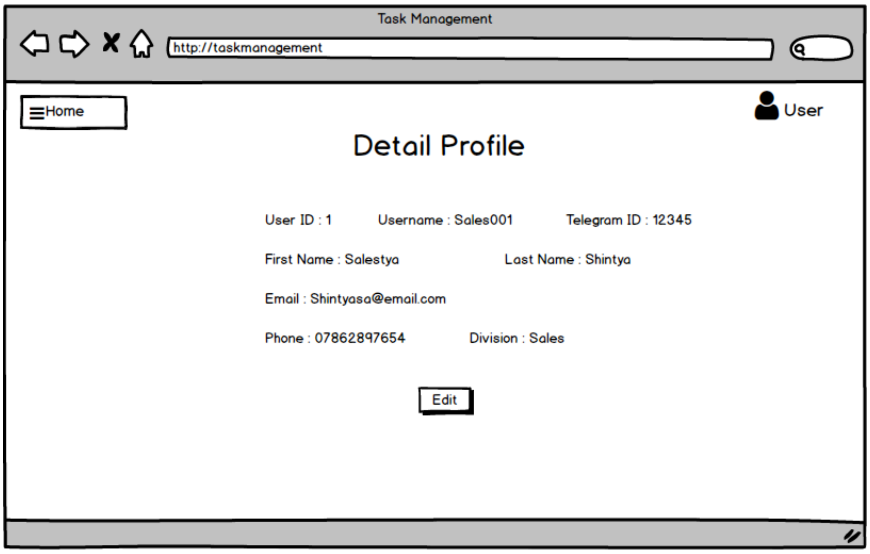


Figure 4.5 Admin-Detail User Profile

4.1.6 Admin – Edit User

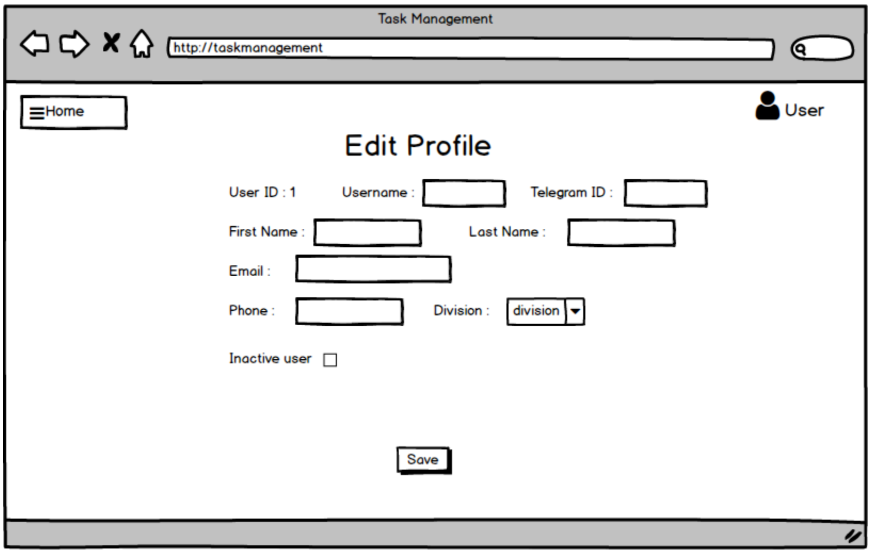


Figure 4.6 Admin-Edit User

Figure 4.6 is an illustration for the page if admin would like to user profile. Admin should fill the editable field to change the user's data. Once Admin click "save" button as it will be a task for Head of Advertising to review the change.

4.1.7 Head of Advertising – Homepage

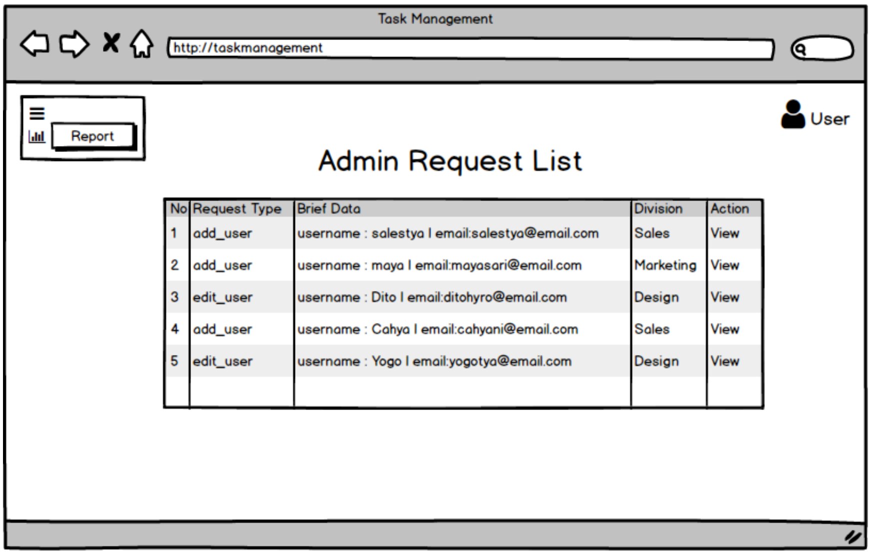


Figure 4.7 Head of Advertising-Homepage

Figure 4.7 is an illustration for the homepage of Head of Advertising (HoA). On this page, HoA would see the pending task from admin of new user request or update. There will be "Report" menu to enter the report page.

4.1.8 Head of Advertising – User Approval

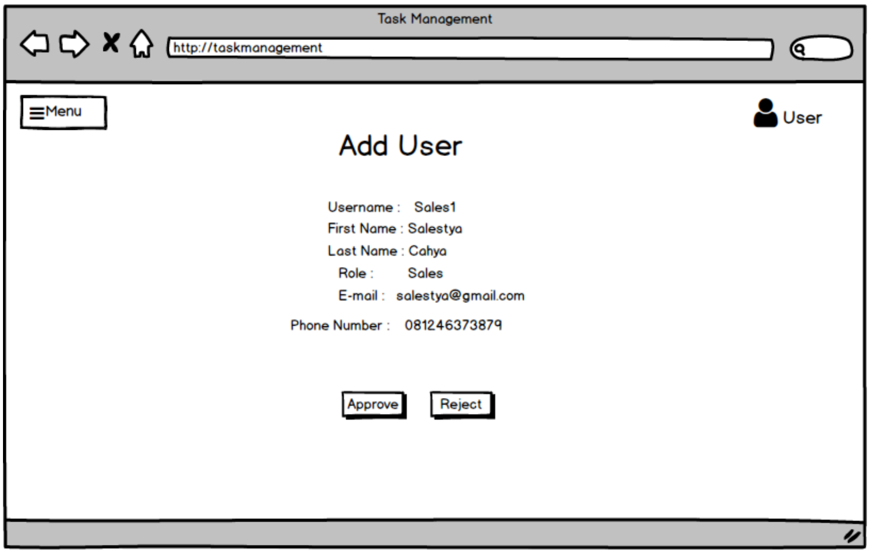


Figure 4.8 Head of Advertising-User Approval

Figure 4.8 is an illustration after HoA choose one of user list. On this page HoA could approve and reject the creation of new user. If there will be action of user's update, it will show the data change on this page.

4.1.9 Head of Advertising – Report

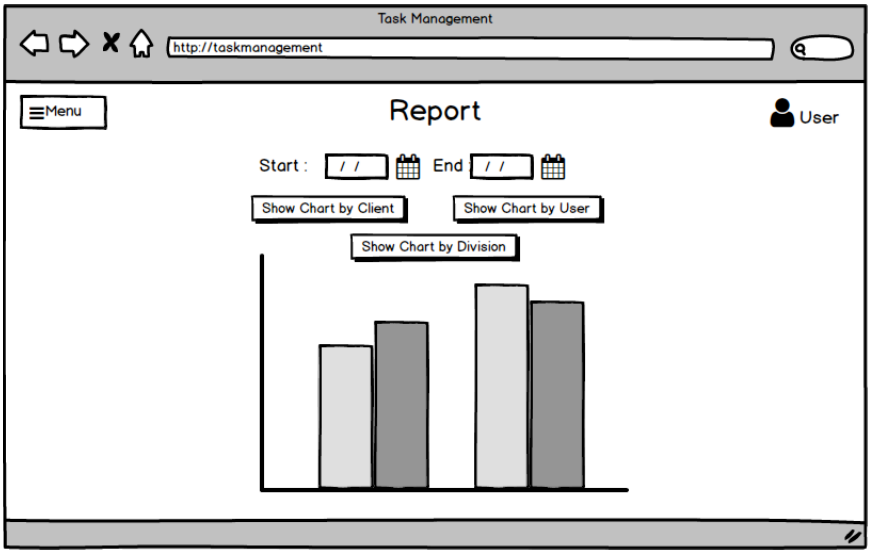


Figure 4.9 Head of Advertising-Report

Figure 4.9 is an illustration for the Report menu of HoA. On this page HoA could see and review the whole projects. HoA should fill the fields based on the desired search criteria then click "Search" button to see the result.

4.1.10 Sales– Homepage

Figure 4.10 is an illustration for Sales homepage. There will be 3 sections which are "To Do", "In Progress", and "Done" so Sales can control their task. On this page, there will be "Create New Project" button to enter page for create new project.

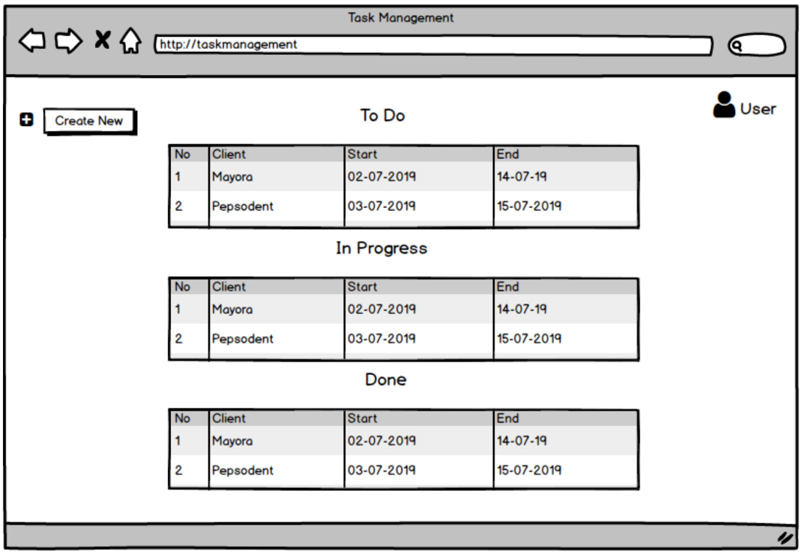


Figure 4.10 Sales-Homepage

4.1.11 Marketing and Design – Homepage

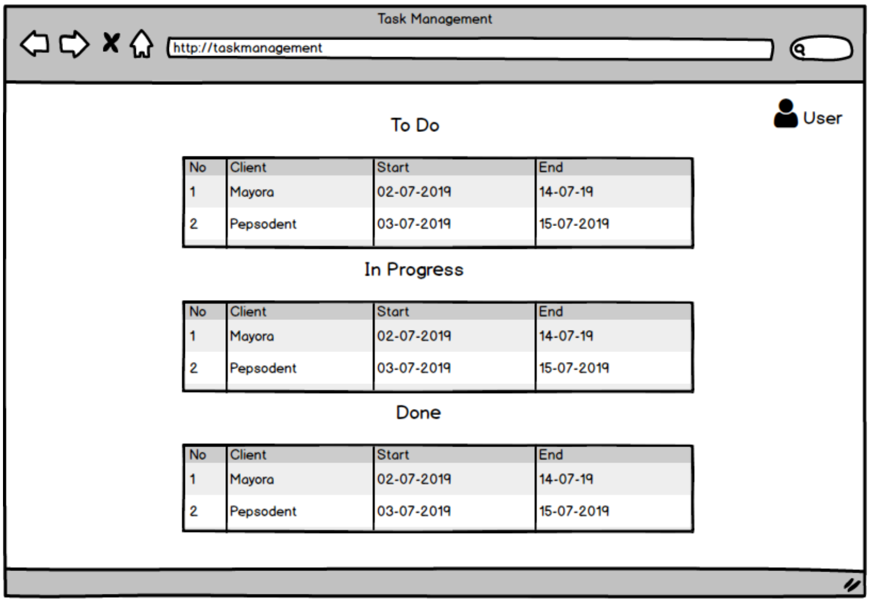


Figure 4.11 Marketing and Design-Homepage

Figure 4.11 is an illustration for Marketing and Design homepage, they have the same design of homepage. There will be 3 sections which are “To Do”, “In Progress”, and “Done” so they can control their task.

4.1.12 Sales – Create New Project

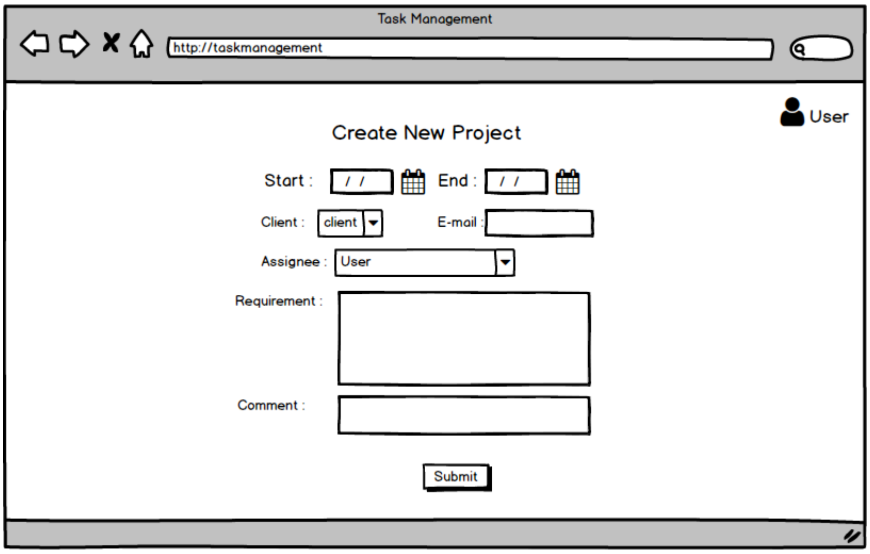


Figure 4.12 Sales-Create New Project

Figure 4.12 is an illustration of the Create New Project page. Sales will fill the details of the project in this page. For the client field, Sales can choose from the dropdown list and if the client is new Sales can add it first.

4.1.13 Sales– To Do

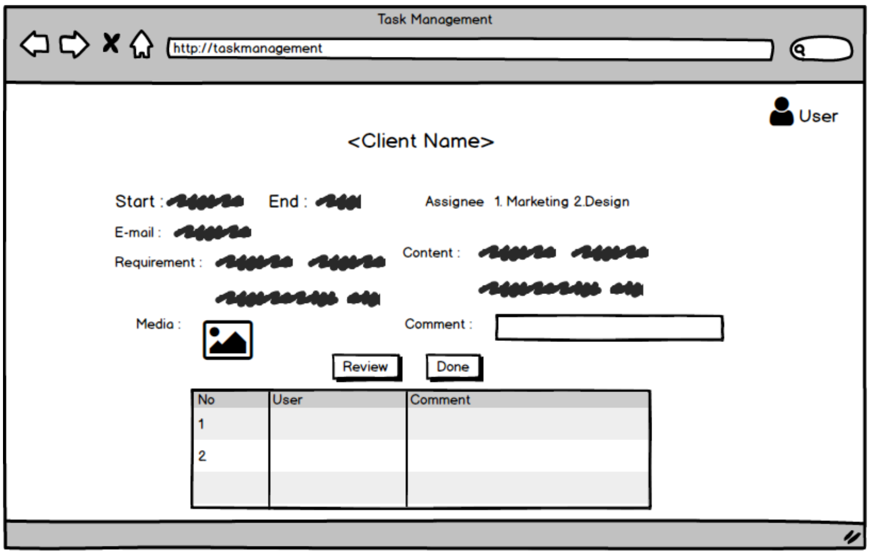


Figure 4.13 Sales-To Do

Figure 4.13 is an illustration of the To Do page of sales. This is the detail for the project that assigned to Sales. On this page, Sales can choose whether this result should be revised or not. If should be revised, Sales click “Review” button then there will be field to choose the last assignee user to be assigns the revision. If no revision, Sales could directly click “Done” button then it will send E-mail notification automatically to the related client.

4.1.14 Sales– In Progress

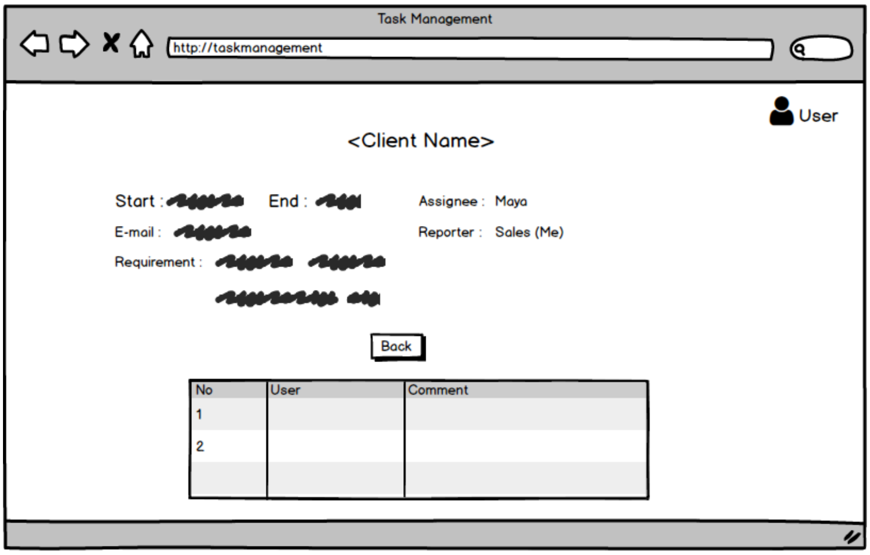


Figure 4.14 Sales-In Progress

Figure 4.14 is an illustration of In Progress page of sales. This is the detail for the project that already assigns to another user. The project in this section is the project that still waiting for approval by assignee.

4.1.15 Sales– Done

Figure 4.15 is an illustration of Done page of sales. This is the detail for the project that already finished. This page will store all of advertising component that has already done by all assigned users.

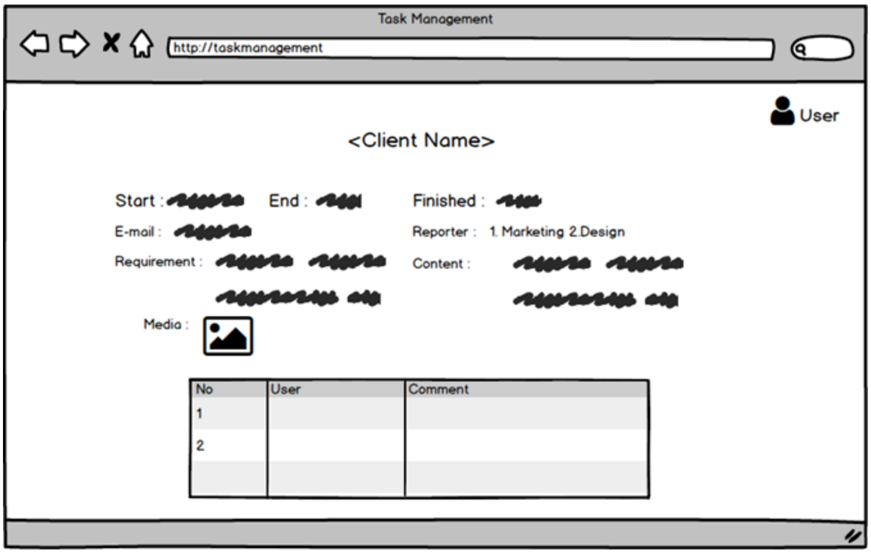


Figure 4.15 Sales-Done

4.1.16 Marketing - To Do

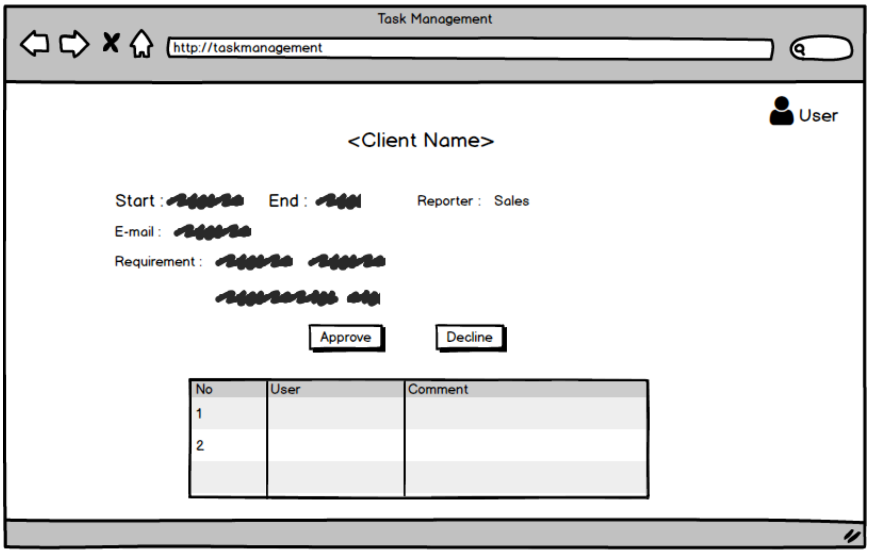


Figure 4.16 Marketing-To Do

Figure 4.16 is an illustration of the To Do page of marketing. This is the detail for the project that assigned to Marketing. Marketing could approve or reject the project. If the project approved it will be in In Progress, but if decline it will be in the To Do of the reporter.

4.1.17 Marketing – In Progress

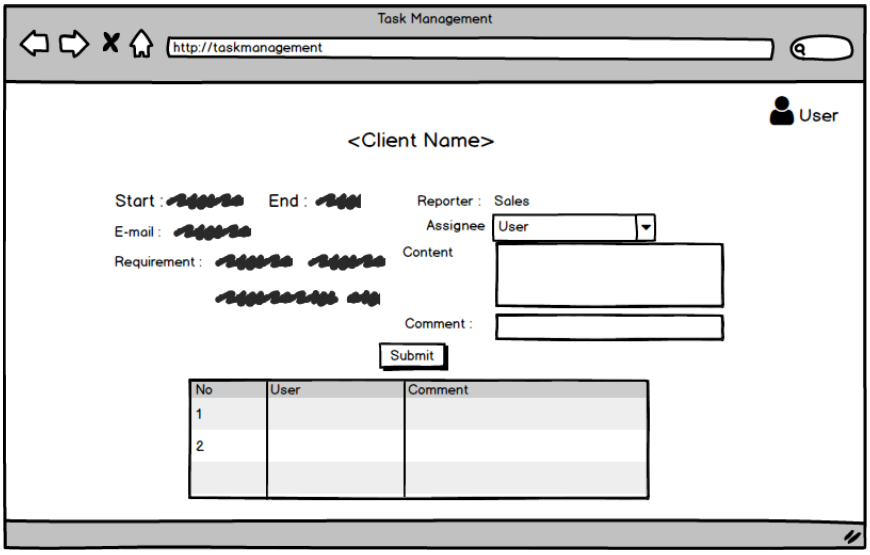


Figure 4.17 Marketing-In Progress

Figure 4.17 is an illustration of In Progress page of marketing. This is the detail for the project that already taken. Marketing should fill the content field contains of the content for the advertising. After it done, marketing should assignee the Design user.

4.1.18 Marketing – Done

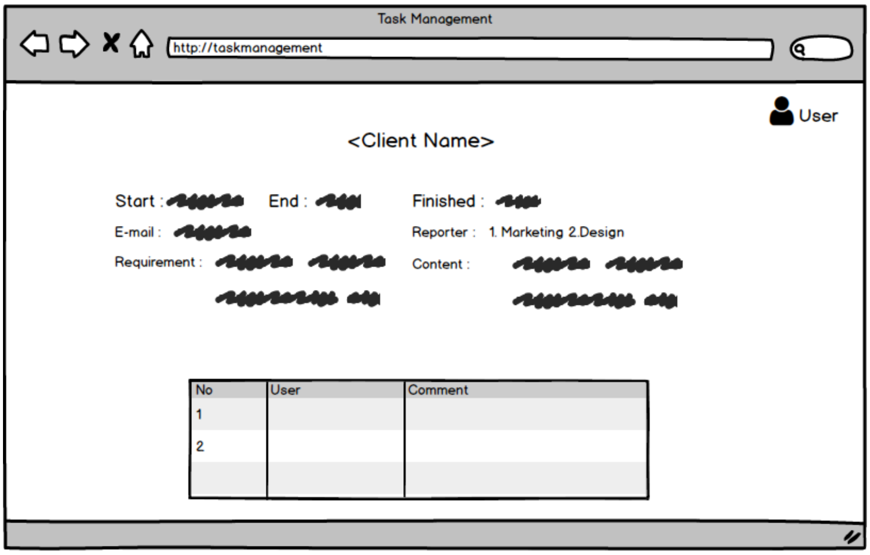


Figure 4.18 Marketing-Done

Figure 4.18 is an illustration of Done page of marketing. This is the detail for the project that already finished by marketing.

4.1.19 Design - To Do

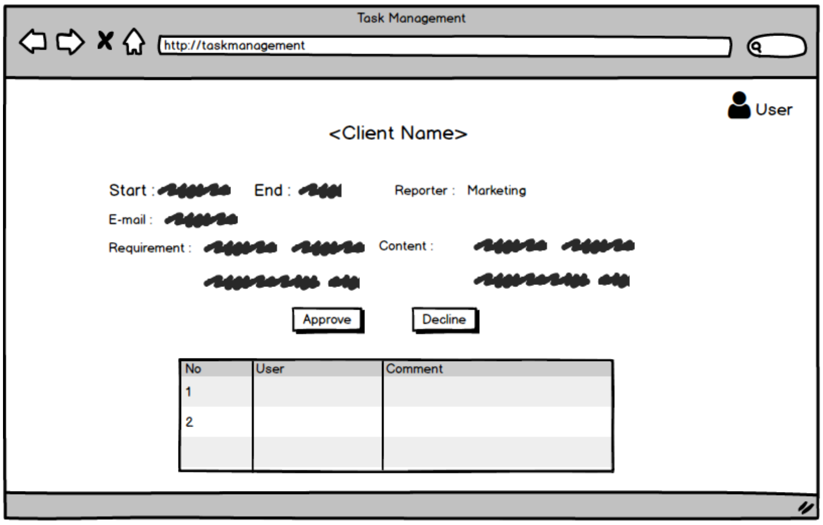


Figure 4.19 Design-To Do

Figure is an illustration of the To Do page of Design. This is the detail for the project that assigned to Design. Design could approve or decline the project. If the project approved it will be in In Progress, but if decline it will be in the To Do of the reporter

4.1.20 Design – In Progress

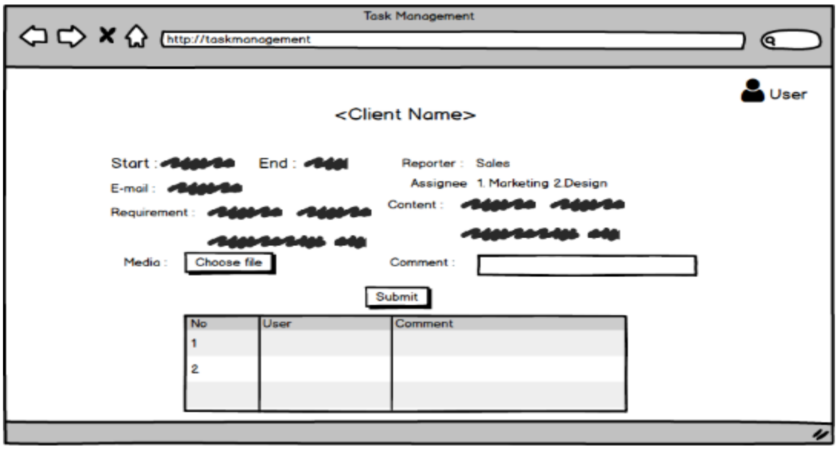


Figure 4.20 Design-In Progress

Figure is an illustration of In Progress page of design. This is the detail for the project that already taken. Design should upload their picture format file that contains of the media for the advertising.

4.1.21 Design – Done

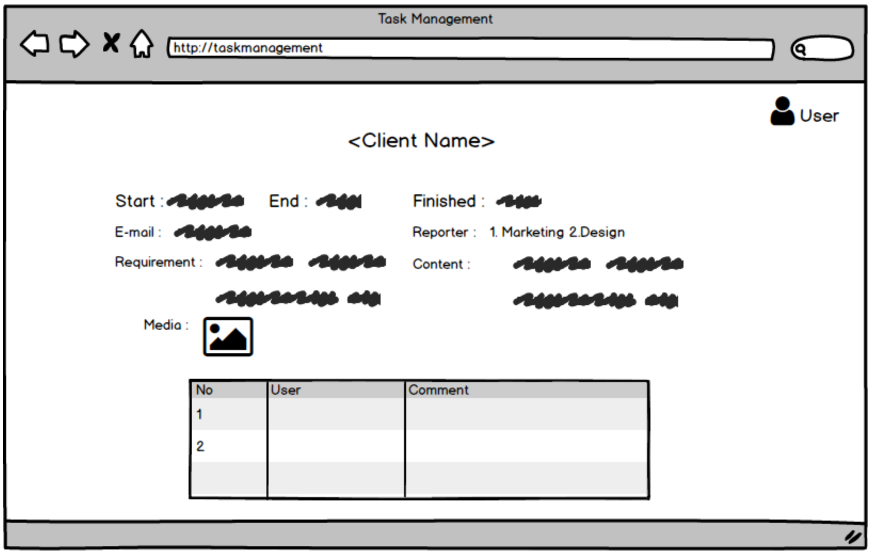


Figure 4.21 Design-Done

Figure 4.21 is an illustration of Done page of Design. This is the detail for the project that already finished by marketing

4.2 Data Design

This section on data design discusses how to organize, store, and handle the data. This section's content is the Entity Relationship Diagram, as well as the configuration of the database tables that will be used in this framework.

4.2.1 Entity Relationship Diagram

The Entity-Relationship Diagram (ERD) is a model that shows the conceptual relationships between system entities and their interaction. The ERD offers an overall view of the operation and a blueprint for constructing physical data structures. The ERD of this thesis is illustrated in Figure 4.22

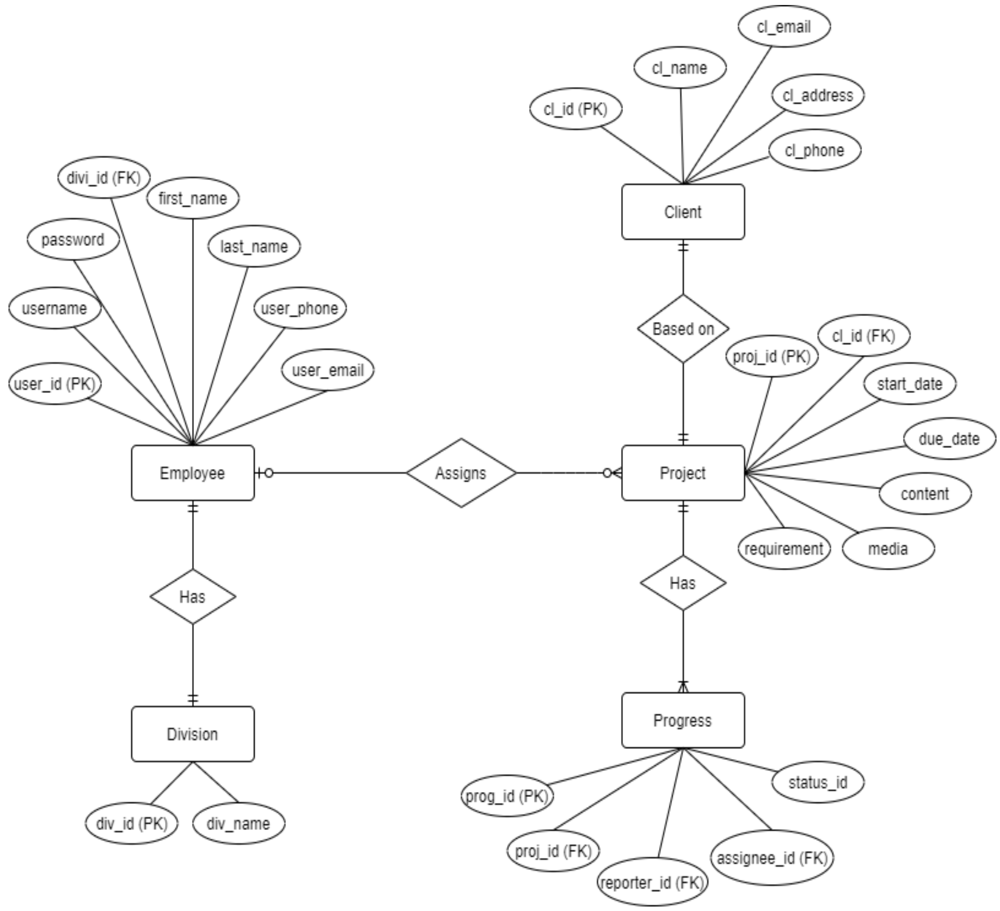


Figure 4.22 Entity Relationship Diagram

4.2.2 Database Tables

In this thesis, the database version has 12 tables. These tables ' attributes will be listed in the table along with the main field and its form of data. The design of the database will be built using MySQL. The detail will be shown in Table 4.1

Table 4.1 Database Tables

Employee Table		
ATTRIBUTE	*DATA TYPE*	*INDEXES / RELATION / DESCRIPTION*
user_id	INT(20)	PRIMARY KEY
username	VARCHAR(30)	

first_name	VARCHAR(100)	
last_name	VARCHAR(100)	
password	VARCHAR(10)	
division_id	INT(11)	FOREIGN KEY
user_email	VARCHAR(100)	
user_phone	VARCHAR(20)	
Division Table		
div_id	INT(11)	PRIMARY KEY
div_name	VARCHAR(30)	
Client Table		
cl_id	INT(11)	PRIMARY KEY
cl_name	VARCHAR(30)	
cl_email	VARCHAR(100)	
cl_address	VARCHAR(100)	
cl_phone	VARCHAR(20)	
Project Table		
proj_id	INT(11)	PRIMARY KEY
cl_id	INT(11)	FOREIGN KEY
start_date	DATE	
due_date	DATE	
requirement	VARCHAR(500)	
content	BLOB	
media	BLOB	
Progress Table		
prog_id	INT(11)	PRIMARY KEY
proj_id	INT(11)	FOREIGN KEY
reporter_id	INT(11)	FOREIGN KEY
assignee_id	INT(11)	FOREIGN KEY
status_id	INT(11)	
Status Table		
status_id	INT(11)	PRIMARY KEY
status_name	VARCHAR(30)	

CHAPTER V

SYSTEM IMPLEMENTATION

This chapter covers the system's implementation process. The system is created using the PHP programming language, using Sublime Text as its code editor and MySQL for the database. This chapter consists of two parts, User Interface development and Application Details. User Interface Design will cover the application's user interface, instructions, and functionality, while Framework Documentation will present along with its explanation about code implementation in the system.

5.1 User Interface Development

This section will cover the features and look of the application. This application has several screens that are divided based on the user, which are: Login Page for all user, Admin page, Head of Advertising page, Sales page, Marketing page, Design page.

The login screen is the first screen that shows when a user opens the application. The interface of the page is shown in Figure 5.1

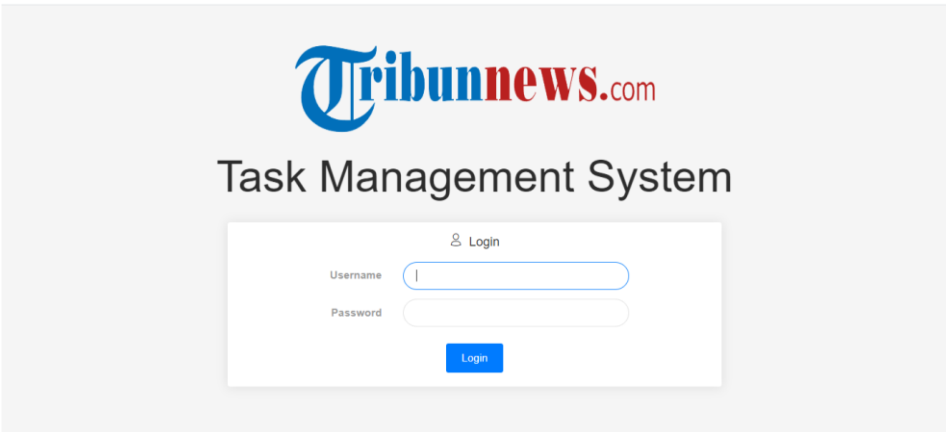


Figure 5.1 Login Page

5.1.1 Admin Home Page

Figure 5.2 is the screen that appears once admin has logged in successfully. This page contains a list of current active user. On this page, there will be "Create User" menu to enter to add user page.

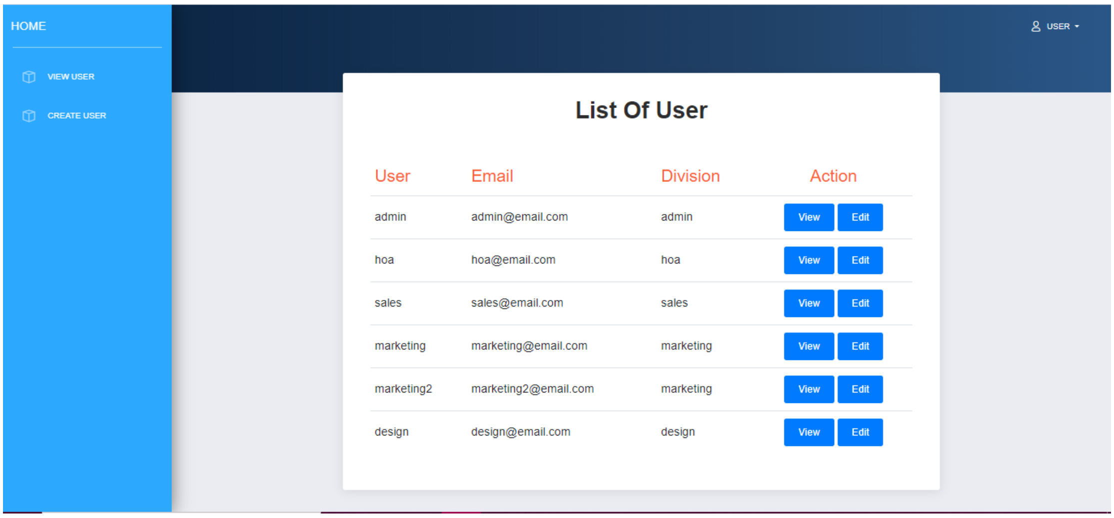


Figure 5.2 Admin Homepage

5.1.2 Admin Create User Page

Figure 5.3 is the screen for Admin to input the new user data. Admin should fill few fields to complete the user data. After admin click "Register" button the request data will automatically send into Head of Advertising.

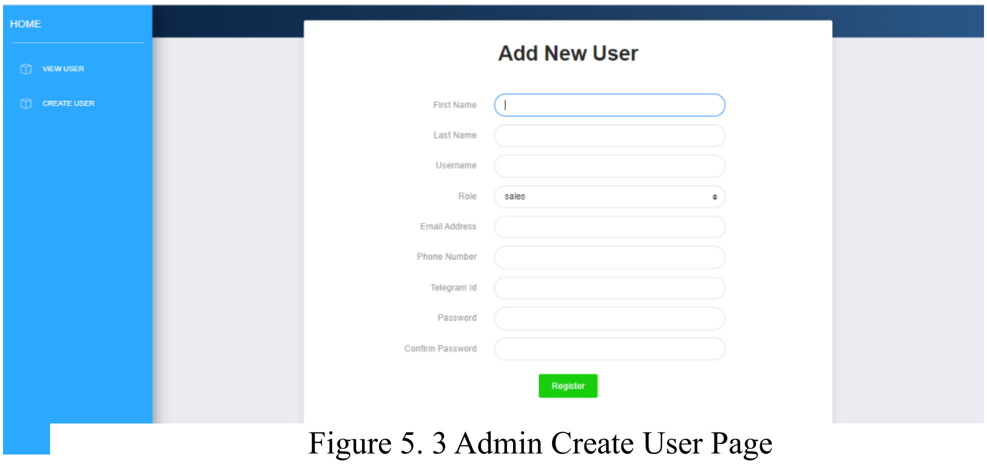


Figure 5. 3 Admin Create User Page

5.1.3 Admin Edit User Page

Figure 5.4 is the edit screen for admin. If there is update for user's data like email or phone number, admin should change that in this screen. If there is a resign user, admin could request to inactivate user through this page.

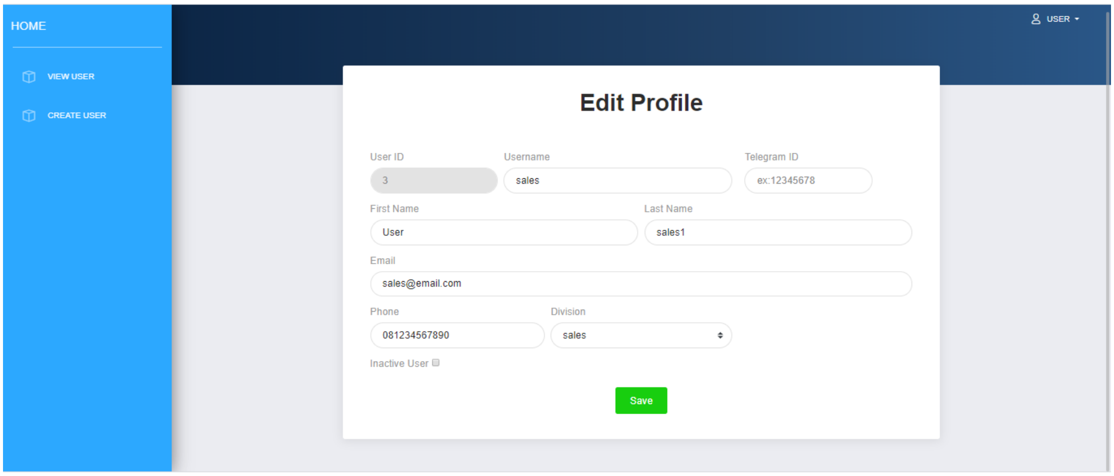


Figure 5.4 Admin Edit User Page

5.1.4 Admin User Detail Page

Figure 5.5 is the detail screen of user data for Admin to check the user data. There will be "Edit" button to in this page so Admin could edit user data directly from detail page.

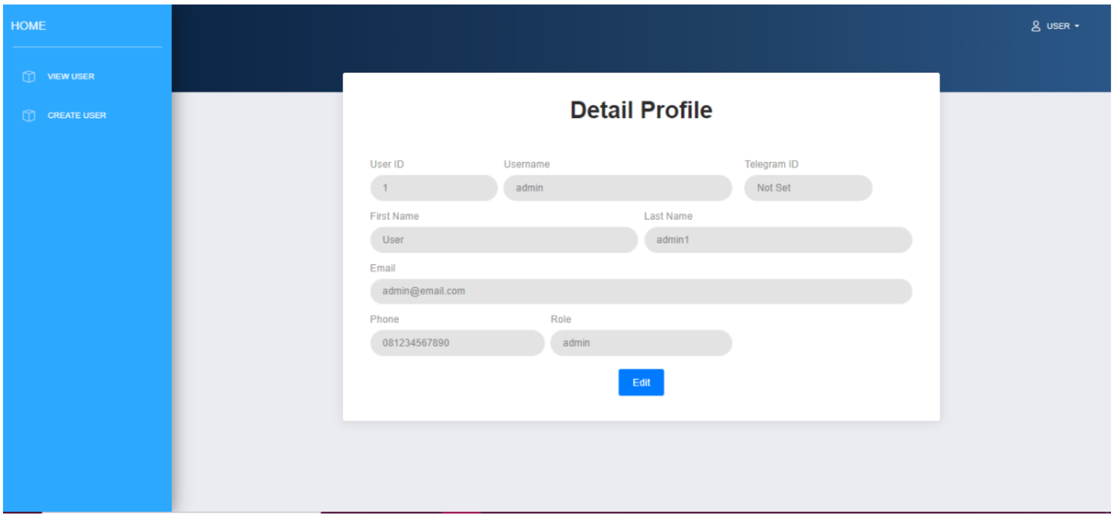


Figure 5.5 Admin User Detail Page

5.1.5 Head of Advertising Homepage

Figure 5.6 is a homepage screen for Head of Advertising. On this page there will be a brief Request List from Admin that Head of Advertising could to action whether approve or reject it. There will be "Report" menu on this screen so Head of Advertising could enter the report screen.

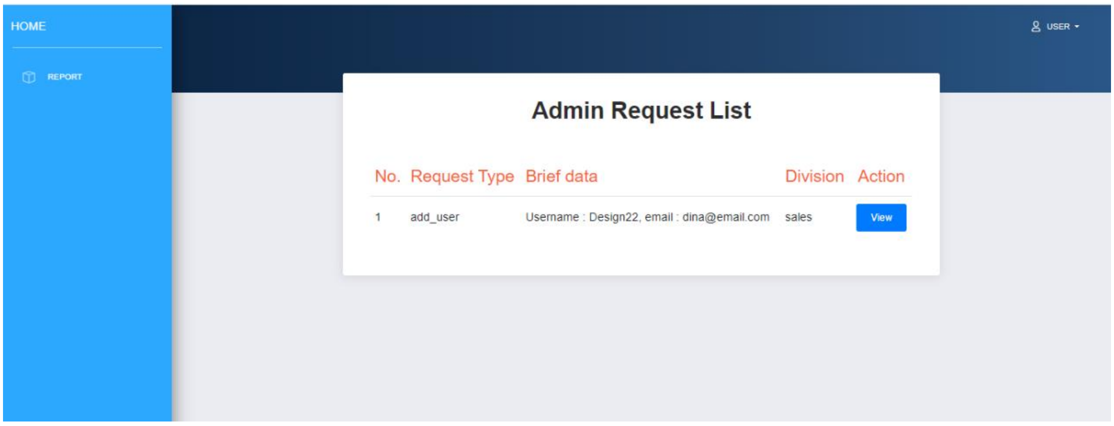


Figure 5.6 Head of Advertising Homepage

5.1.6 Head of Advertising Approval Page

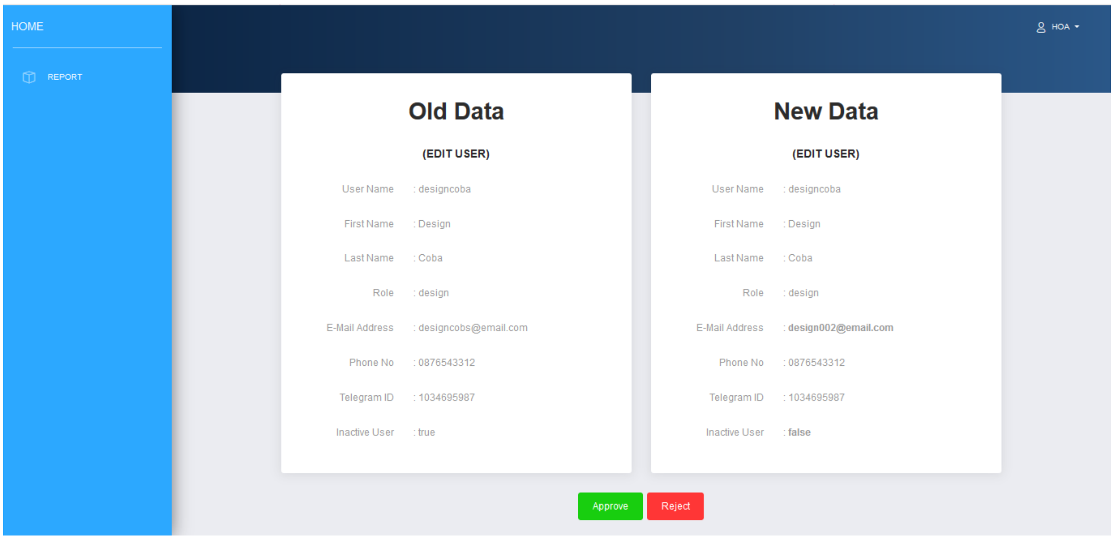


Figure 5.7 Head of Advertising Approval Page

Figure 5.7 is a user approval screen that contains the request detail, after choose one of request list, Head of Advertising will decide whether to approve or reject on this screen. If Head of Advertising would like to approve, HoA should click “Approve” button, then if would like to reject, just click “Reject” button. On the update action from admin, the screen will displays the old and new data to see what is the update. To differentiate it, the change data will indicator with the bold text so the HoA could easily know the data change.

5.1.7 Head of Advertising Report page

This page is a report screen that can be accessed only by Head of Advertising. After input the range date, HoA should choose what’s report that HoA would like to see such as by Client, User, or by Division. The chart diagram will be display to more visualize the report.

5.1.7.1 Report by Client

Figure 5.V.8 Report by Client

Figure 5.8 is shown the report that is classified by Client. This report will show the totals of project based on To Do, In Progress, and Done in every client. So, HoA could see which client that has still many tasks to be done.

5.1.7.2 Report by Division

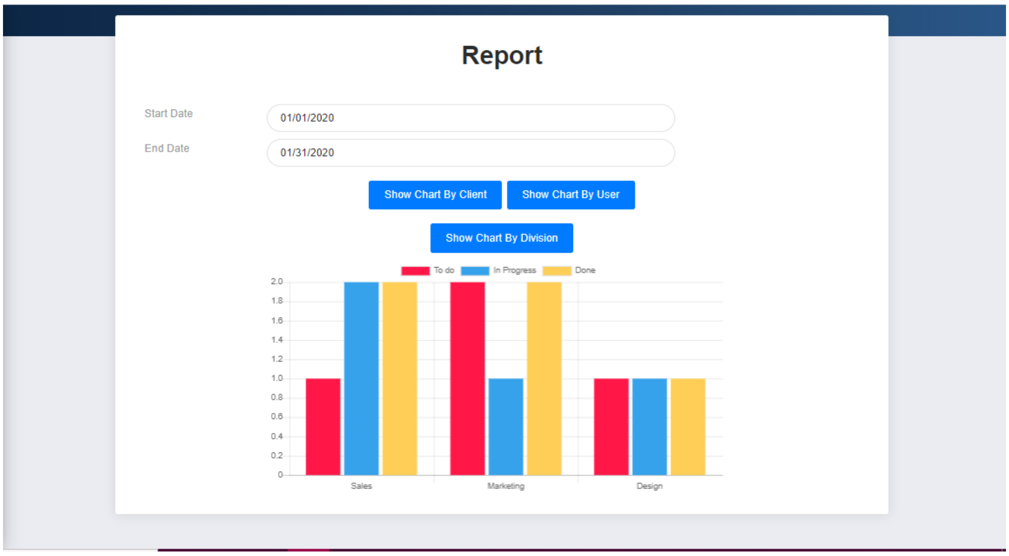


Figure 5. 9 Report by Division

Figure 5.9 is shown the report that is classified by division. This report will show the totals of project based on To Do, In Progress, and Done in every division So, HoA could assess the work performance based on the client.

5.1.7.3 Report by User

Figure 5.10 Report by User

Figure 5.10 is shown the report that is classified by how long every user finished the task in every project. On this report, HoA could assess and observe the work performance for every user by see the working duration in a days measure.

5.1.8 Sales Homepage

Figure 5.11 is a homepage screen for Sales only. The difference is in Sales homepage, there will be “Create New Project” menu because Sales is the first user that will assign a Task to other users. On Sales homepage, there will be 3 sections which are “To Do”, “In Progress”, and “Done” so Sales can easily manage their task priority.

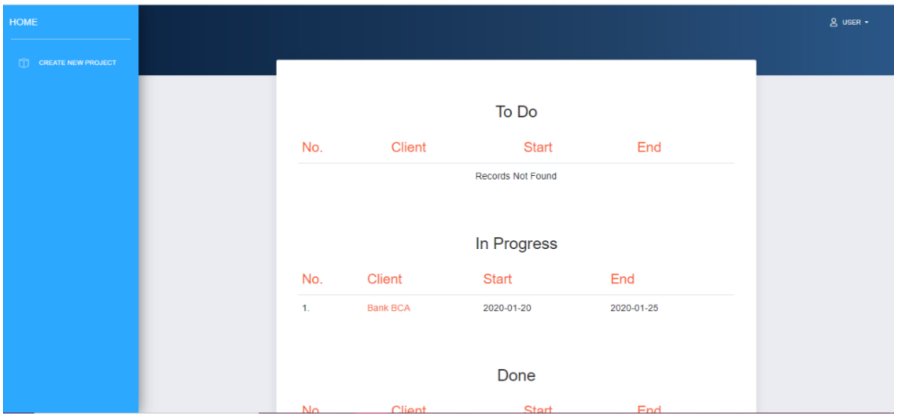


Figure 5.11 Sales Homepage

5.1.9 Sales Create New Project Page

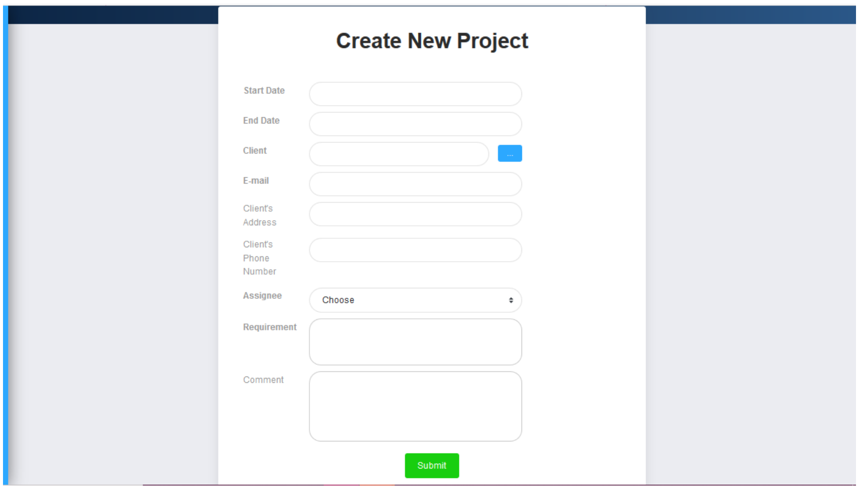


Figure 5.12 Sales Create New Project

Figure 5.12 is a screen for Sales to add new project and start to assign the task to the related user. On this page, sales should input few fields such as Start and End date of project, Client's name and email, and the requirement from client as a direction for other user to doing their task. On this page, the suggestion for the assignee user is the related team which is Marketing team, so there just show the list of users from Marketing team.

5.1.10 Sales In Progress Page

Figure 5.13 is for user that already created by sales, but still waiting for approval by the assignee user. If the assignee user rejects the task, the project will be in the "To Do" section of the sales, but if it is being approved, the project will be in the "Done" section of the sales.

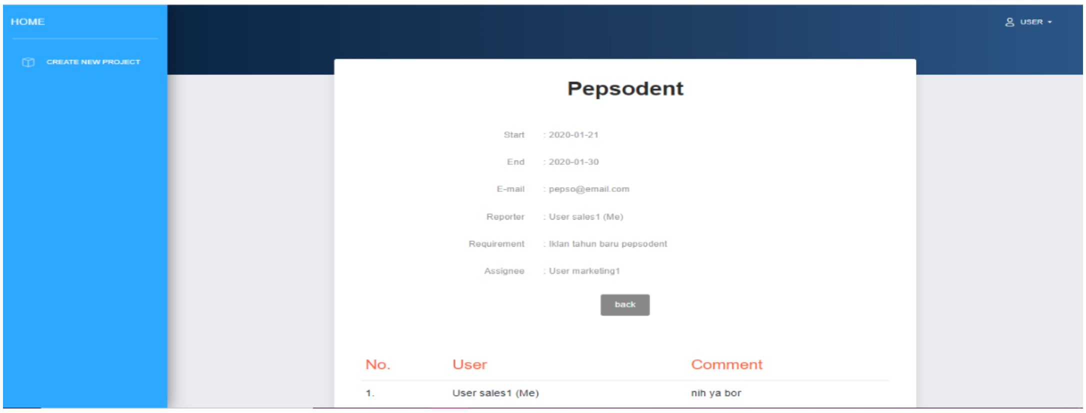


Figure 5.13 Sales In Progress

5.1.11 Sales Done Page

Figure 5.14 is for a project that already done by the sales, all of the component records will be display here. The components from Marketing and Design will be stored in this page. So sales could see project history in here.

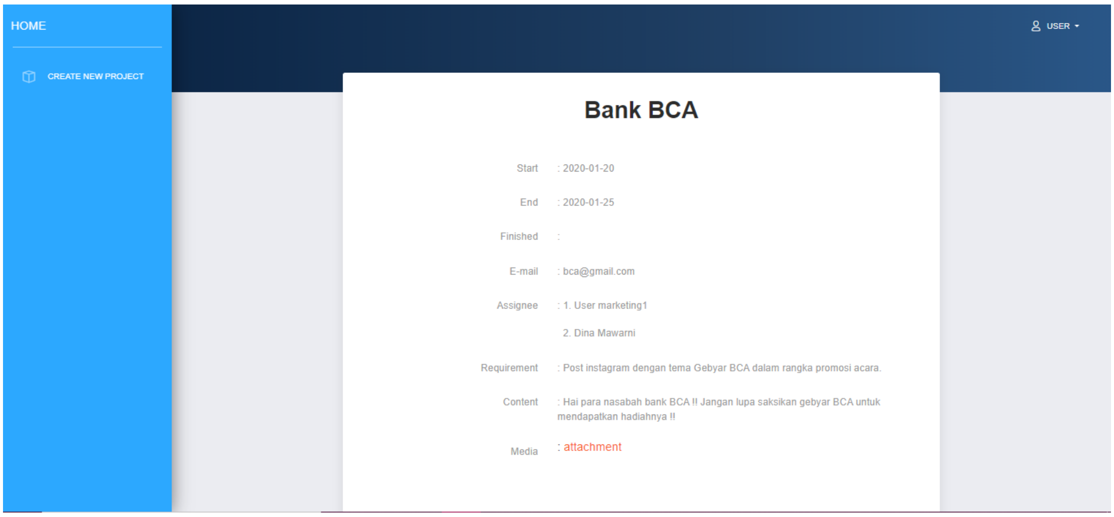


Figure 5.14 Sales Done Page

5.1.12 Marketing and Design Homepage

Figure 5.17 is a screen for Marketing and Design homepage, there are no difference between Marketing and Design because there is no specific menu for each other. On this homepage, there will be 3 sections which are "To Do", "In Progress", and "Done" so Marketing and Design can easily manage their task priority.

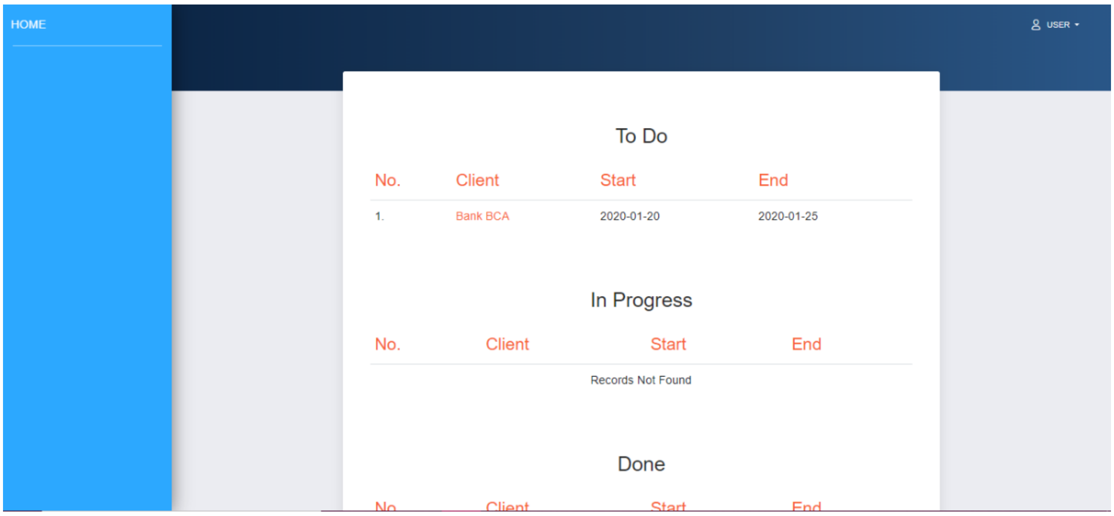


Figure 5.15 Marketing and Design Homepage

5.1.13 Sales To Do Page

Figure 5.15 is for project that already done by the last user. Sales needs to do the review for this project in this page. On this page, sales could choose the related assignee user to revise their task whether it is from marketing or design team.

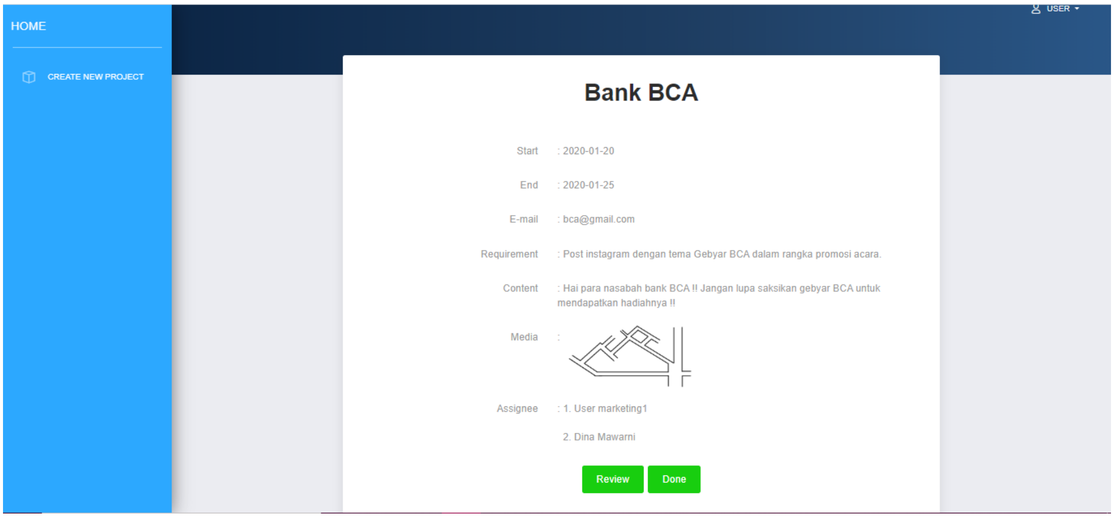


Figure 5.16 Sales To Do Page

Figure 5.16 is a screen for Sales to ask a revise from other users that already done the task before. Sales could ask revision to the marketing or design team before.

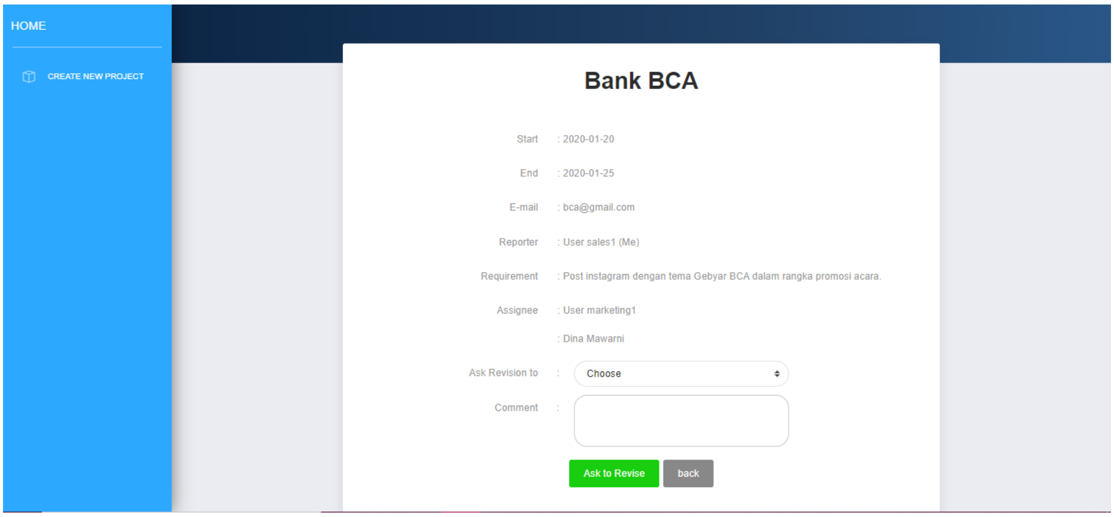


Figure 5.17 Ask To Revise Page

5.1.14 Marketing In Progress

Figure 5.19 is a screen for project that already approved by Marketing. On this page there will be "Content" field that Marketing should input to finish their task. There will be assignee field that will display the list of related team which is Design team.

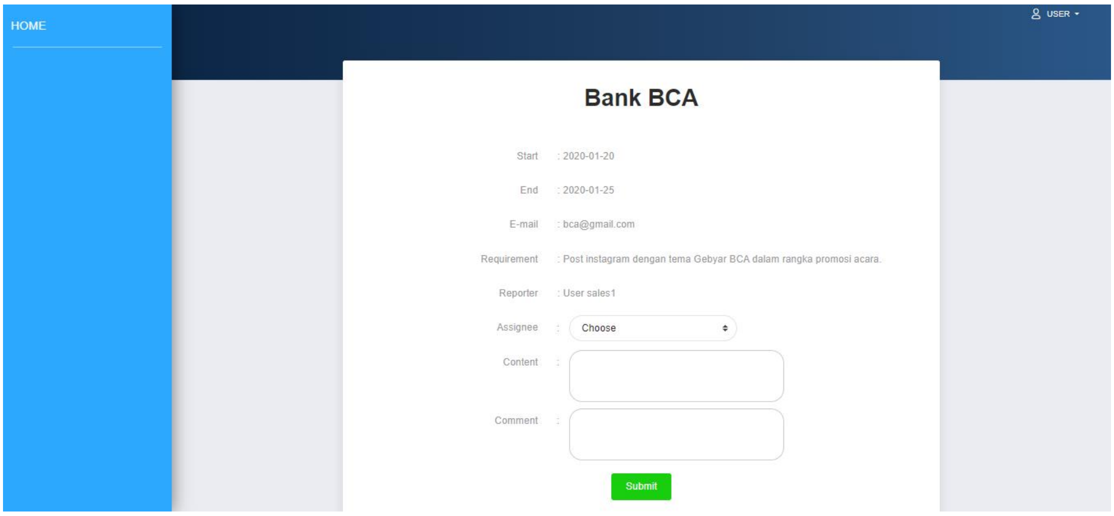


Figure 5.18 Marketing In Progress

5.1.15 Marketing To Do

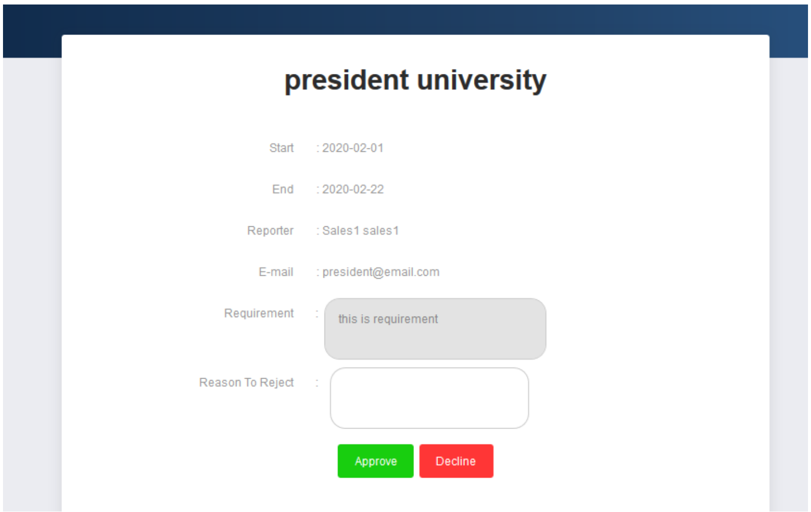


Figure 5.19 Marketing To Do

This page is a screen for project that is assigned to Marketing user. On this page, Marketing could approve or reject the task, if Marketing approve, the project will be in

"In Progress" section, if Marketing reject project, the project will be in "To Do" section of the reporter, so they could assign new user. There also a reject reason field if the Marketing would like to reject.

5.1.16 Marketing Done

Figure 5.20 is a screen for the project that is already finished by Marketing. All of the project records will be display in this page.

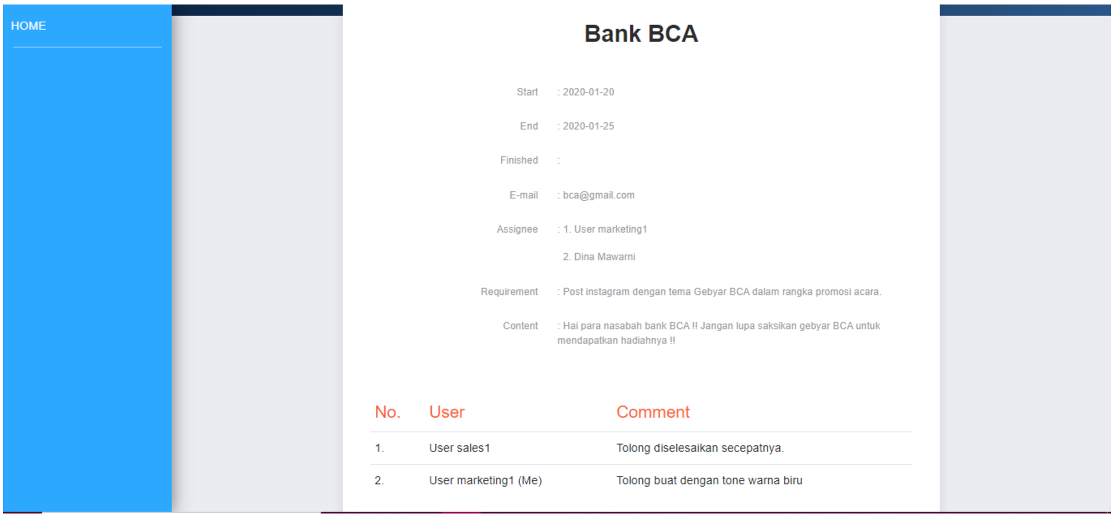


Figure 5.20 Marketing Done

5.1.17 Design To Do

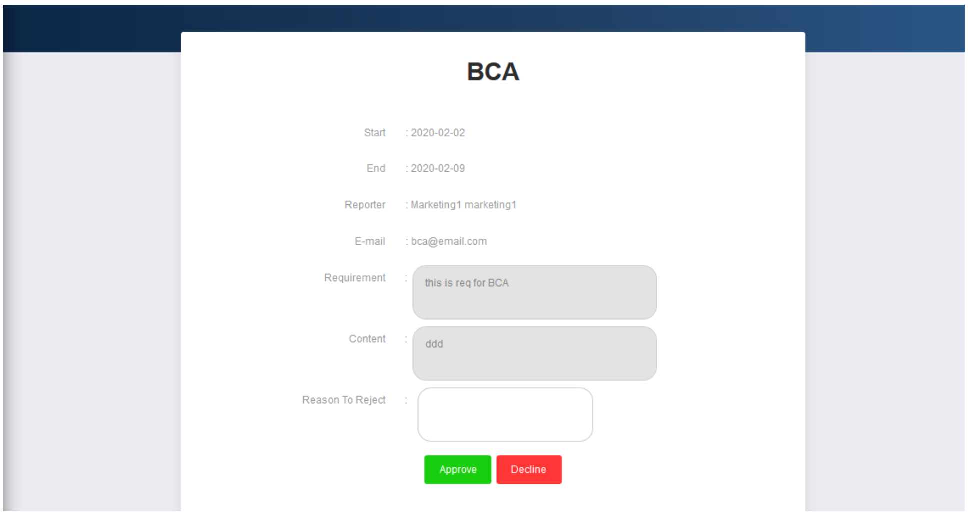


Figure 5.21 Design To Do

Figure 5.21 is a screen for project that is assigned to Design user. On this page, Design could approve or reject the task, if Design approve, the project will be in "In Progress" section, if Design reject project, design should fill the reject reason field and the project will be in "To Do" section of the reporter, so they could assign new user.

5.1.18 Design In Progress

Figure 5.22 is a screen for project that already approved by Design. On this page there will be "Media" field so Design could upload the image file of their design to finish their task. The assignee field will be automatically to the creator of the project which is sales team.

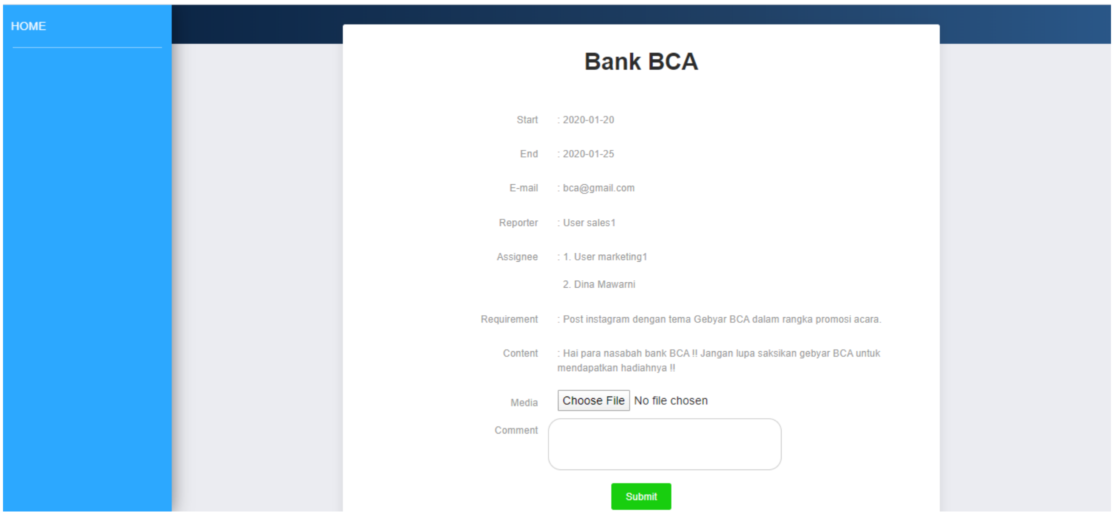


Figure 5.22 Design In Progress

5.1.19 Design Done

Figure 5.23 is a screen for the project that is already finished by Design. Design result will be stored in this page with requirement from Sales and the content from Marketing.

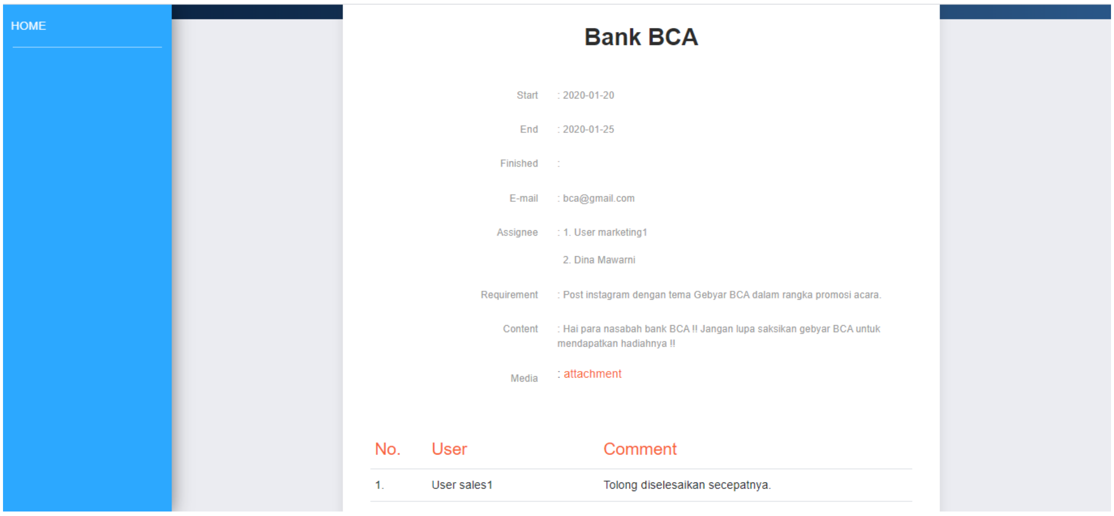


Figure 5.23 Design Done

5.2 Application Details

Application Details describes how the features of this application are implemented in code.

5.2.1 Sales Create New Project

```
public function saveNewProject(Request $request){
        $validator = Validator::make($request->all(), [
            'start_date' => 'required|date',
            'due_date' => 'required|date|after:start_date',
            'cl_name' => 'required|max:255',
            'cl_email' => 'required|email',
            'user_id' => 'required',
            'requirement' => 'required'
        ],[
            'user_id.required' => 'assignee field is required',
            'cl_name.required' => 'client name field is required',
            'cl_email.required' => 'client email field is required',
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
```

Figure 5.24 Save Project Function

This is the first action to do the task assignation, first after Sales view Create New Project form in Figure 5.12, and Sales should fill the fields then click the "Submit" button.

Once Sales click “Submit” button, it will runs saveNewProject() functions that used to validate all the fields in Create New Project form. If it is passed the validation, it will update the database like in Figure 5.25, status_id of project will be updated into ‘2’ which means “Waiting for Marketing Approver” and will update “Progress” section of Sales, so this project will be in “In Progress” section. At last, it will return sendMessage/ function to send notification to the assignee user.

```
$client = client::whereClEmail(request('cl_email'))->first();
        if(is_null($client)){
            $client = new client;
            $client->cl_name = request('cl_name');
            $client->cl_email = request('cl_email');
            $client->save();
        }
        $project = new project;
        $date = explode('/',request('start_date'));
        $project->start_date = DateTime::createFromFormat('Y-m-d', $date[2].'-'.$date[0].'-'.$date[1]);
        $date = explode('/',request('due_date'));
        $project->due_date = DateTime::createFromFormat('Y-m-d', $date[2].'-'.$date[0].'-'.$date[1]);
        $project->requirement = request('requirement');
        $project->cl_id = $client->cl_id;
        $project->status_id = 2;
        $project->save();

        $progress = new progress;
        $progress->proj_id = $project->proj_id;
        $progress->reporter_id = auth()->id();
        $progress->assignee_id = request('user_id');
        $progress->comment = request('comment');
        $progress->save();

        return redirect('sendMessage/'.request('user_id')."/3");
```

Figure 5.25 Update Database

5.2.2 Marketing Approve and Do the Task

If Marketing get a Task from Sales, Marketing should check it into their “To Do” section like in Figure 5.18. If marketing click “Approve” button, it will runs approve() function in Figure 5.26 that will update status_id into ‘3’ which means “Approved by Marketing” and it will goes into “In Progress” section of Marketing. If marketing click “Decline” it will runs disapprove() functions and update status_id back into ‘1’ which means “Assign” that Sales should assigns new user (it will goes into “To

Do" section of Sales). It also will make a comment to remark rejected project, then it will return sendReject/ to send reject notification into the reporter (sales).

```
public function approve(){
        $progress = progress::whereProgressId(request('id'))->first();
        $progress->project->status_id = 3;
        $progress->project->save();
        return redirect('home');
    }
    public function disapprove(){
        $progress = progress::whereProgressId(request('id'))->first();
        $progress->project->status_id = 1;
        $progress->assignee_id = null;
        $progress->save();
        $progress->project->save();
        $newProgress = new progress;
        $newProgress->proj_id = $progress->proj_id;
        $newProgress->reporter_id = auth()->id();
        $newProgress->assignee_id = $progress->reporter_id;
        $newProgress->comment = 'sorry i reject';
        $newProgress->save();

        return redirect('sendReject/'.$progress->reporter_id);
    }
```

Figure 5.26 Function Approve for Marketing

In "In Progress" section of the project, Marketing should fill the required fields like in Figure 5.19 after click "Submit" button it will runs submitProgress() function to validates the fields and update the status_id into '4' which means "Waiting for Design Approval" to be in "To Do" section of Design then will return 'sendMessage/' to send notification into assignee user.

```
public function submitProgress(){
        $validator = Validator::make(request()->input(), [
            'assignee_id'=>'required',
            'content'=>'required'
        ],[
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
        $project = project::whereProjId(request('proj_id'))->first();
        $project->content = request('content');
        $project->status_id = 4;
        $project->save();
        $progress = new progress;
        $progress->proj_id = $project->proj_id;
        $progress->reporter_id = auth()->id();
        $progress->assignee_id = request('assignee_id');
        $progress->comment = request('comment');
        $progress->save();


        return redirect('sendMessage/'.request('assignee_id')."/4");
    }
```

Figure 5.27 Submit Progress Function

5.2.3 Design Approve and Do the Task

If Design get a Task from Marketing, Design should check it into their “To Do” section like in Figure 5.21 and select the project to be executed. After select the project, Design will be direct into task approval page.

```
public function approve(){
        $progress = progress::whereProgressId(request('id'))->first();
        $progress->project->status_id = 5;
        $progress->project->save();
        return redirect('home');
    }
    public function disapprove(){
        $progress = progress::whereProgressId(request('id'))->first();
        $progress->project->status_id = 1;
        $progress->assignee_id = null;
        $progress->save();
        $progress->project->save();
        $newProgress = new progress;
        $newProgress->proj_id = $progress->proj_id;
        $newProgress->reporter_id = auth()->id();
        $newProgress->assignee_id = $progress->reporter_id;
        $newProgress->comment = 'sorry i reject';
        $newProgress->save();

        return redirect('sendReject/'.$progress->reporter_id);
    }
```

Figure 5.28 Function Approve

If Design click “Approve” button, it will runs approve() function (figure that will update status_id into ‘5’ which means “Approved by Design” and it will goes into “In Progress” section of Design. If Design click “Decline” it will runs disapprove() functions and update status_id back into ‘1’ which means “Assign” that Marketing should assigns new user (it will goes into “To Do” section of Marketing). It also will make a comment to remark rejected project, then it will return sendReject/ to send reject notification into the reporter (marketing).

```
public function submitProgress(){
        $validator = Validator::make(request()->file(), [
                        'file' => 'required|file|mimes:jpg,jpeg,png|max:10240'
        ],[
            'file.mimes' => 'the upload must be in format of jpg, jpeg, png'
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
        $project = project::whereProjId(request('project_id'))->first();
        $path = request()->file('file')->getRealPath();
        $image = file_get_contents($path);
        $base64 = base64_encode($image);
        $project->media = $base64;
        $project->media_type = $_FILES['file']['type'];
        $project->status_id = 6;
        $project->save();

        $progress = new progress;
        $progress->proj_id = $project->proj_id;
        $progress->reporter_id = auth()->id();
        $progress->assignee_id = $project->progresses[0]->reporter_id;
        $progress->comment = request('comment');
        $progress->save();
        return redirect('sendMessage/'.$project->progresses[0]->reporter_id."/5");
    }
```

Figure 5.29 Submit Progress

In “In Progress” section of the project, Design should fill the required fields like in Figure 5.22 after click “Submit” button it will runs submitProgress() function to validates the fields such as validate the file required type is JPEG, JPG, and PNG with maximum size is 10mb then will update the status_id into ‘6’ which means “Sales

Review" to be in "To Do" section of Sales to being reviewed. Then it will return 'sendMessage/' to send a notification into Sales to review the task.

5.2.4 Sales Review and Assign User

```
public function review(){
        $progress = project::whereProjId(request('proj_id'))->first();
        $progress->status_id = 7;
        $progress->save();
        return redirect('sales/progress/'.request('proj_id'));
    }
    public function revision(){
        $validator = Validator::make(request()->input(), [
            'assignee_id'=>'required',
        ],[
            'assignee_id.required' => 'please choose who to you want ask to revise'
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
        $project = project::whereProjId(request('proj_id'))->first();
        $assignee = User::find(request('assignee_id'));
        if($assignee->div_id == 4){
            $project->status_id = 10;
        }
        else if($assignee->div_id == 5){
            $project->status_id = 8;
        }
        $project->save();
        $progress = new progress;
        $progress->proj_id = $project->proj_id;
        $progress->reporter_id = auth()->id();
        $progress->assignee_id = request('assignee_id');
        $progress->comment = request('comment');
        $progress->save();
        return redirect('sendMessage/'.request('assignee_id')."/3");
    }
```

Figure 5.30 Review Function

After all of assignee user finish their task, it will automatically assign to Sales or the project creator to being reviewed like in Figure 5.15 . Once Sales click "Review" button it will runs review() function in Figure 5.30 to change status_id of project become '7' which means "Sales Review on Progress" after that Sales will enter ask to revise page to assigns the related user before (Marketing or Design) to revise their task. If Sales click "Ask to Revise" button like in Figure 5.16 it will runs revision() function in Figure 5.30 to validates the required fields, change status_id based on division ID, like if division ID is '4' which means Marketing, the status_id will be '10' means Marketing Revision. Else, if division ID is 5, the status_id will be '8' means Design Revision. At last it will return 'sendMessage/' to send personal notification to the assignee user.

5.2.5 Marketing Revision

```
public function revise(){
        $progress = project::whereProjId(request('id'))->first();
        $progress->status_id = 11;
        $progress->save();
        return redirect('marketing/progress/'.request('id'));
    }

    public function submitRevision(){
        $validator = Validator::make(request()->input(), [
            'content'=>'required'
        ],[
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
        $project = project::whereProjId(request('proj_id'))->first();
        $project->content = request('content');
        $project->status_id = 6;
        $project->save();
        $progress = new progress;
        $progress->proj_id = $project->proj_id;
        $progress->reporter_id = auth()->id();
        $progress->assignee_id = $project->progresses[0]->reporter_id;
        $progress->comment = request('comment');
        $progress->save();


        return redirect('sendMessage/'.$project->progresses[0]->reporter_id."/4");
    }
```

Figure 5.31 Revise Function

If there is a revision that assigns to Marketing, it will in "To Do" section of Marketing, then Marketing should click "Revise" button to start the revision through runs revise() function in Figure 5.31 that will change the status_id into '11' means Marketing Revision on Progress so Marketing could enter the revision page. After

Marketing in revision page and revise their task, it will run submitRevision function to validates all required fields, change status_id into '6' means Sales review so sales could review once again, last will return 'sendMessage/' to send a notification to Sales. This function is same if the revision is assigns to Design, the difference is just the status_id.

5.2.6 Project Done

If there is no revision, Sales could directly click "Done" button like in a page in Figure 5.14 .Once "Done" button is clicked, it will runs finishProject() function in Figure 5.15 to change status_id of project into '12' which means Project Done, and it will save into database and return 'sendEmail/' to send E-mail notification to the related client that contains the Advertising Report.

```
public function finishProject(){
        $progress = project::whereProjId(request('proj_id'))->first();
        $progress->status_id = 12;
        $progress->save();
                return redirect('sendEmail/'.$progress->proj_id);
        }
```

Figure 5.32 Finish Project Function

5.2.7 Send Telegram Notification

```
public function sendTelegramMessage($userID,$senderDivision){
        $user = User::find($userID);
        if(!is_null($user->telegram_id)){
            $token = "934290314:AAEzTr2xI7hIsYiw62gLjpY1rYaOtTniLGQ";
            if($user->div_id != 3)
                $message = "Hello, ".$user->first_name." ".$user->last_name." have a new task, please check your Task Management to do it.";
            else
                $message = "Hello, ".$user->first_name." ".$user->last_name." project already done by the assignee,
                                kindly please check your Task Management to review.";
            $requestParam = [
                'chat_id' => $user->telegram_id,
                'text' => $message
            ];
            $requestUrl = "https://api.telegram.org/bot".$token."/sendMessage?".http_build_query($requestParam);
            file_get_contents($requestUrl);
        }
        if($senderDivision == 3)
            return redirect('home')->with(['alert'=>'alertSuccess','message'=>'successfully assign task to assignee']);
        else{
            if($user->div_id == 3)
            return redirect('home')->with(['alert'=>'alertSuccess','message'=>'successfully done task please wait sales to review it']);
            else
            return redirect('home')->with(['alert'=>'alertSuccess','message'=>'successfully assign task to assignee']);
        }
    }
```

Figure 5.33 Send Telegram Message Function

When ‘sendMessage/’ runs, it will call functions sendTelegramMessage() and will validates the message by user_id. If user_id is not equal to ‘3’ which means ‘Sales’ it will send message contains a task assignation, but if the user_id is ‘3’ it will send task to review the result. This functions will request URL from theAPI of telegram bot to send into the assignee user. After the telegram message successfully send, it will return ‘alertSuccess’ to show the success notification.

If ‘sendReject/’ runs it will call sendTelegramMessageReject() function to send the reject message into assignee’s telegram. The flow will same into function in Figure 5.33, the difference is just the message content.

```
public function sendTelegramMessageReject($userID){
        $user = User::find($userID);
        if(!is_null($user->telegram_id)){
            $token = "934290314:AAEzTr2xI7hIsYiw62gLjpY1rYaOtTniLGQ";
            $message = 'Dear, '.$user->first_name.' '.$user->last_name.' task is being rejected. Please check your "To Do" to assign new user';
            $requestParam = [
                'chat_id' => $user->telegram_id,
                'text' => $message
            ];
            $requestUrl = "https://api.telegram.org/bot".$token."/sendMessage?".http_build_query($requestParam);
            file_get_contents($requestUrl);
        }
        return redirect('home')->with(['alert'=>'alertError','message'=>'successfully reject task']);
    }
```

Figure 5.34 Send Telegram Message for Reject

5.2.8 Send Email Notification

```
public function mailsend($param){
        $project = project::whereProjId($param)->first();
        $details = [
            'dear'=>'Dear, '.$project->client->cl_name,
            'row1' => 'Here is your advertising report with following components : ',
                        'row2' => 'Requirement : '.$project->requirement,
                        'row3' => 'Content : '.$project->content,
                        'row4' => 'Thank you',
            'image' => $project->media
        ];

        \Mail::to($project->client->cl_email)->send(new SendMail($details));
        return redirect('home')->with(['alert'=>'alertSuccess','message'=>'successfully finish the project']);
    }
```

Figure 5.35 Send Mail Function

Once Sales already click “Done” button for the project in Figure 5.14 it will return function to send email notification to the client like in Figure 5.32. The first function that runs is mailsend in Figure 5.35, this function needs parameter project_id so it will assign where to send the email. Then it will call SendMail class and throw parameter $detail and return success alert to Sales.

In sendmail class, there will be two functions like in Figure 5.36. Construct function is needed to define mandatory variable through put the value of $details into $this variables and will be return in build() function that produce ‘Advertising Report’ as email subject, change image file in database into ‘image’ with the file name ‘gambar.jpeg’ and call email interface through view(‘email.sendmail’);

```
public function __construct($details)
    {
        //
        $this->details = $details;
    }

    public function build()
    {
        return $this->subject('Advertising Report')->attachData(base64_decode($this->details['image']),'gambar.jpeg',[])
                    ->view('email.sendmail');
    }
```

Figure 5.36 function in sendmail class

5.2.9 Admin Create New User and Edit User

Admin could create new user in add new user form like in Figure 5.3, when admin click ‘Register’ button it will trigger addUser() in Figure 5.37 function to validate and save for a while the inputted data into database and return success alert then it will send into “To Do” section of Head of Advertising.

```
public function addUser(Request $request){
        $validator = Validator::make($request->all(), [
            'user_name' => 'required|unique:users|min:8|max:255',
            'first_name' => 'required|max:255',
            'last_name' => 'required|max:255',
            'email' => 'required|email|unique:users',
            'password' => 'required|min:8',
            'password_confirmation' => 'required_with:password|same:password',
            'telegram_id' => request('telegram_id') != null ? 'regex:/^[0-9]*$/' : '',
            'phone' => request('phone') != null ? 'regex:/(0)[0-9]*$/' : ''
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }

        $user = new User;
        $user->user_name = $request->get('user_name');
        $user->first_name = $request->get('first_name');
        $user->last_name = $request->get('last_name');
        $user->phone = $request->get('phone');
        $user->email = $request->get('email');
        $user->div_id = $request->get('role');
        $user->password = bcrypt($request->get('password'));
        $user->telegram_id = request('telegram_id');
        $requestAdmin = new requestAdmin;
        $requestAdmin->data = json_encode($user->getAttributes());
        $requestAdmin->type = 'add_user';
        $requestAdmin->save();
        return redirect('/user')->with('alertSuccess','successfully requested to add new user');
    }
```

Figure 5.37 addUser function

```
public function editUser(Request $request){
        $validator = Validator::make($request->all(), [
            'user_name' => 'required|unique:users,id,'.$request->input('user_id').'|min:8|max:255',
            'first_name' => 'required|max:255',
            'last_name' => 'required|max:255',
            'email' => 'required|email|unique:users,id,'.$request->input('user_id'),
            'telegram_id' => request('telegram_id') != null ? 'regex:/^[0-9]*$/' : '',
            'phone' => request('phone') != null ? 'regex:/(0)[0-9]*$/' : ''
        ]);
        if ($validator->fails()) {
            $validator->validate();
        }
        $user = User::find($request->get('user_id'));
        $user->user_name = $request->get('user_name');
        $user->first_name = $request->get('first_name');
        $user->last_name = $request->get('last_name');
        $user->phone = $request->get('phone');
        $user->email = $request->get('email');
        $user->div_id = $request->get('role');
        $user->telegram_id = request('telegram_id');
        if(is_null($request->input('isInactive')))
            $user->isInactive = 0;
        else
            $user->isInactive = 1;
        $requestAdmin = new requestAdmin;
        $requestAdmin->data = json_encode($user->getAttributes());
        $requestAdmin->type = 'edit_user';
        $requestAdmin->save();
        return redirect('/user')->with('alertSuccess','successfully requested to edit user');
    }
```

Figure 5.38 editUser function

Once Admin would like to edit user like in Figure 5.4 then click ‘Save’ button, it will trigger editUser() function in Figure 5.38, this function is to validate all the fields then save it into database for a while to send request to Head of Advertising to be approved. Then it will return alert success.

5.2.10 Head of Advertising User Approval

```
public function userApprove(Request $request){
        $detail = requestAdmin::find(request('id'));
        $detail->data = json_decode($detail->data);
        if(request('type')=='edit_user'){
            $user = User::find($detail->data->id);
            $user->first_name = $detail->data->first_name;
            $user->last_name = $detail->data->last_name;
            $user->user_name = $detail->data->user_name;
            $user->email = $detail->data->email;
            $user->phone = $detail->data->phone;
            $user->div_id = $detail->data->div_id;
            $user->telegram_id = $detail->data->telegram_id;
            $user->isInactive = $detail->data->isInactive;
            $user->save();
        }
        else if(request('type')=='add_user'){
            $user = new User;
            $user->first_name = $detail->data->first_name;
            $user->last_name = $detail->data->last_name;
            $user->user_name = $detail->data->user_name;
            $user->email = $detail->data->email;
            $user->phone = $detail->data->phone;
            $user->div_id = $detail->data->div_id;
            $user->password = $detail->data->password;
            $user->save();
        }
        requestAdmin::find(request('id'))->delete();
        return redirect('home')->with('alertSuccess','data successfully approved');
    }
    public function userDisapprove(Request $request){
        requestAdmin::find(request('id'))->delete();
        return redirect('home');
    }
```

Figure 5.39 Head of Advertising user approval

When Head of Advertising would like to review the request from admin like in Figure 5.7, the data will be display based on the action such as add user and edit user. If there is edit user action, the screen will display old value and new value. If Head of

Advertising click ‘Approve’ button, it will run userApprove() function in Figure 5.39 and saved the update into database and return success alert. But if Head of Advertising click ‘Reject’ button it will run userApprove() function in Figure 5.39 to delete user from requestAdmin based on the ID and return Head of Advertising homepage.

5.2.11 Head of Advertising Report

On the Report menu for Head of Advertising, there will be 3 categories of report divided into by Client, User, and Division like in Figure 5.8 until 5.10, the explanation about all of the categories already explained on sub-chapter 5.1.7 Explanation for the every function of the categories will be explained in Figure 5.40 until Figure 5.43

```
@foreach($clients as $client)
   @php($todo = 0)
   @php($inprogress = 0)
   @php($done = 0)
   @php($doneLate = 0)
   @foreach($client->projects as $project)
      @if($project->status_id == 1 || $project->status_id == 2)
         @php($todo++)
      @elseif($project->status_id == 12)
         @php($done++)
      @elseif($project->status_id == 13)
         @php($doneLate++)
      @else
         @php($inprogress++)
      @endif
    @endforeach
    @php(array_push($labelClient,$client->cl_name))
    @php(array_push($todos,$todo))
    @php(array_push($inprogresses,$inprogress))
    @php(array_push($dones,$done))
    @php(array_push($lates,$doneLate))
@endforeach
```

Figure 5.40 By Client Report

Figure 5.40 shows the process to get a calculation for total of To Do, In Progress, and Done in every client. To calculate that, it will use status_id to define each status of the project. This function will do looping to check whether the project will be in To Do, In Progress, or Done

```
@php(array_push($labelClient,'Sales','Marketing','Design'))

                    @php($todo = 0)
                    @php($inprogress = 0)
                    @php($done = 0)

                    @foreach($projects as $project)
                        @if($project->status_id == 1 || $project->status_id == 6 )
                            @php($todo++)
                        @elseif($project->status_id == 2 || $project->status_id==7)
                            @php($inprogress++)
                        @else
                            @php($done++)
                        @endif
                    @endforeach
                    @php(array_push($todos,$todo))
                    @php(array_push($inprogresses,$inprogress))
                    @php(array_push($dones,$done))


                    @php($todo = 0)
                    @php($inprogress = 0)
                    @php($done = 0)

                    @foreach($projects as $project)
                        @if($project->status_id == 1 || $project->status_id == 2 || $project->status_id == 10 )
                            @php($todo++)
                        @elseif($project->status_id == 3 || $project->status_id==4 || $project->status_id == 11)
                            @php($inprogress++)
                        @else
                            @php($done++)
                        @endif
                    @endforeach
```

Figure 5.41 By Division Report

Figure 5.41 and Figure 5.42 shows the process to get a calculation for total of To Do, In Progress, and Done in every Division. To calculate that, it will use status_id to define each status of the project. This function will do looping to check whether the project will be in To Do, In Progress, or Done. The check sequence will be start in the project own by Sales, Marketing, and last by Design.

```
@php(array_push($todos,$todo))
@php(array_push($inprogresses,$inprogress))
@php(array_push($dones,$done))



@php($todo = 0)
@php($inprogress = 0)
@php($done = 0)

@foreach($projects as $project)
    @if($project->status_id == 4 || $project->status_id == 8 )
        @php($todo++)
    @elseif($project->status_id == 5 || $project->status_id==9)
        @php($inprogress++)
    @elseif($project->status_id != 4 && $project->status_id != 5 && $project->status_id != 8 && $project->status_id != 9 && $project->status_id > 4
        @php($done++)
    @endif
@endforeach
@php(array_push($todos,$todo))
@php(array_push($inprogresses,$inprogress))
@php(array_push($dones,$done))


@endif
```

Figure 5.42 By Division Report (cont.)

```
@php($marker = 0)
@php($c = 0)
@foreach($project->progresses as $progress)
    @if($progress->assignee_id == $project->progresses[0]->reporter_id)
        @php($marker = $c)
    @elseif($marker!=0 && $progress->reporter_id == $project->progresses[0]->reporter_id)
        @php($daySales += (date_diff(date_create($project->progresses[$marker]->updated_at),date_create($progress->created_at))->format("%d")))
    @endif
    @php($c++)
@endforeach


@if(count($labelUser)>1)
    @php($marker = 0)
    @php($c = 0)
    @foreach($project->progresses as $progress)
        @if($progress->assignee_id == $project->progresses[0]->assignee_id)
            @php($marker = $c)
        @elseif($progress->reporter_id == $project->progresses[0]->assignee_id)
            @php($dayMarketing += (date_diff(date_create($project->progresses[$marker]->updated_at),date_create($progress->updated_at))->format("%d")))
        @endif
        @php($c++)
    @endforeach
@endif



@if(count($labelUser)>2)
    @php($marker = 0)
    @php($c = 0)
    @foreach($project->progresses as $progress)
        @if($progress->assignee_id == $userDesign)
            @php($marker = $c)
        @elseif($progress->reporter_id == $userDesign)
            @php($dayDesign += (date_diff(date_create($project->progresses[$marker]->updated_at),date_create($progress->updated_at))->format("%d")))
        @endif
        @php($c++)
    @endforeach
@endif
```

Figure 5.41 By User Report

Figure 5.43 shows the process to get a calculation for work duration for every user in every project. The calculation will be taken from the progress for every project by seeing the creation and the updated date for every progress on each user.

CHAPTER VI

SYSTEM TESTING

6.1 Testing Plan

Before release the Task Management System, the quality and the performance of the system must be tested first. It is to make sure the system will be handed over without any errors or problems and make sure the system same with the required business process and the compliance of PT Tribun Digital Online. The testing method that will be used is Black Box Testing. This method will examine the functionality of an application without peering into its internal structures. The full explanation about the testing process will be explained in this chapter.

6.2 Testing Environment

Testing environment is the functionalities of the system that is used for testing the application. This application is tested using the hardware and software that listed below as follows:

1. 64-bit Microsoft Windows 10 Operating System
2. 12 GB of RAM for the program
3. XAMPP 3.2.4 for Windows
4. Google Chrome for browser
5. Smartphone with Telegram Application

6.3 Testing Scenario

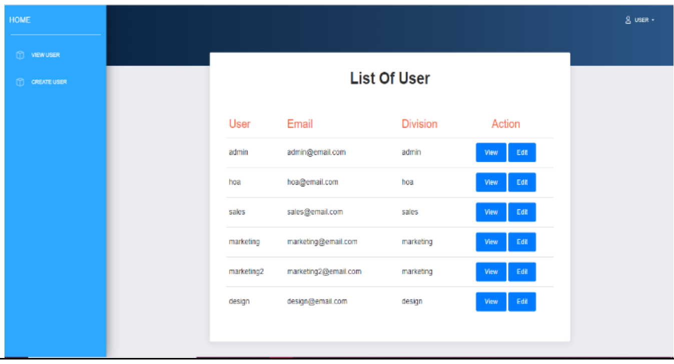
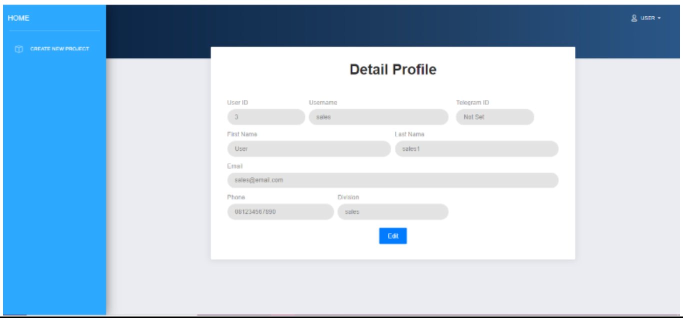
Testing Scenario is done by using some cases to ensure the system works as expected. The scenario is divided based on the user, it will divide into six sections which are All User, Admin, Head of Advertising, Sales, Marketing, and Design sections.

6.3.1 All User Section

Table 6.1 Testing Scenario for All User Section

TC ID	Scenario	Expected Result	Evaluation
TC001	Admin login	Admin success to login and directly to Admin homepage	As expected
TC002	Head of Advertising login	HoA success to login and directly to HoA homepage	As expected
TC003	Sales login	Sales success to login and directly to Sales homepage	As expected
TC004	Marketing login	Marketing success to login and directly to Marketing homepage	As expected
TC005	Design login	Design success to login and directly to Design homepage	As expected
TC006	View Profile Detail	All user can view their profile detail after click profile button	As expected
TC007	Logout	All user can logout after click "Logout" button	As expected

Table 6.2 Testing Result for All User Section

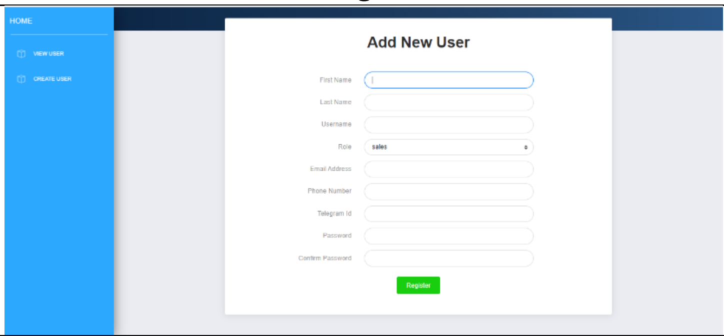
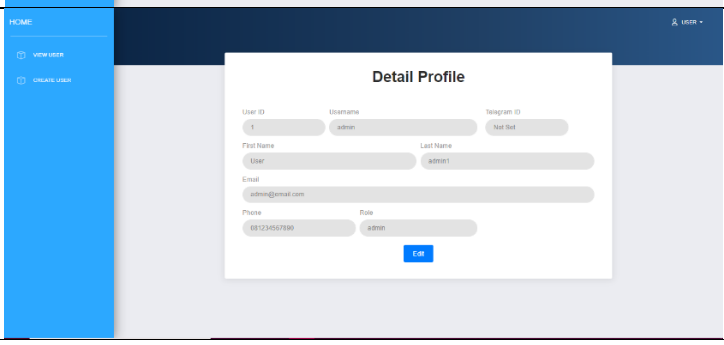
TC ID	Testing Proof
TC001	
TC006	

6.3.2 Admin Section

Table 6.3 Testing Scenario for Admin Section

No	Scenario	Expected Result	Evaluation
1	View homepage	Precondition: Admin already login. Admin could access homepage	As expected
2	Create user	Admin could create user after click "Create User" button	As expected
3	Edit user	Admin could edit user detail after choose one of the user lists	As expected
4	Inactivate User	Admin could inactivate user after choose one of the user lists	As expected
5	View user detail	Admin could view the detail from the user after choose one of the user list	As expected

Table 6.4 Testing Result for Admin Section

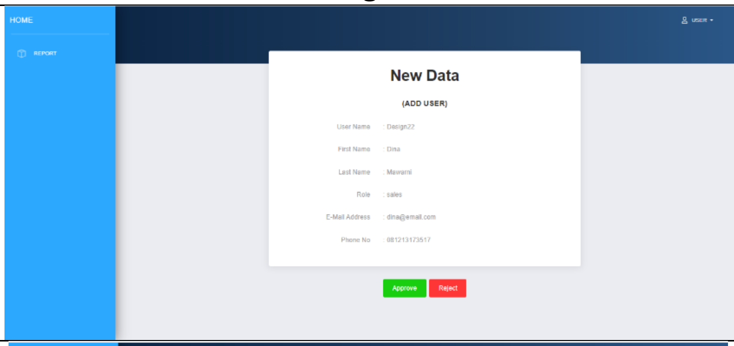
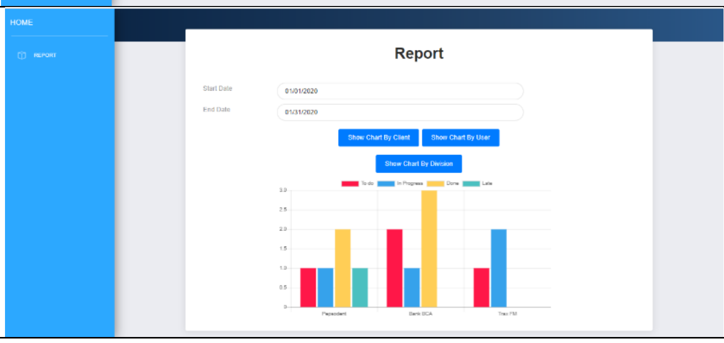
TC ID	Testing Proof
TC002	
TC005	

6.3.3 Head of Advertising Section

Table 6.5 Testing Scenario for Head of Advertising Section

No	Scenario	Expected Result	Evaluation
1	View homepage	Precondition : HoA already login. HoA could access homepage	As expected
2	View list of User approval	HoA could see the list of user that should to be approve in homepage	As expected
3	Approve new user	HoA could approve the registration of new user	As expected
4	Decline new user	HoA could decline the registration of new user	As expected
5	View Report	HoA could view the report activity and search by criteria	As expected

Table 6.6 Testing Result for Head of Advertising Section

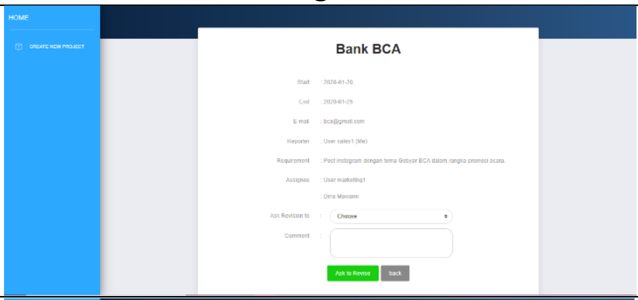
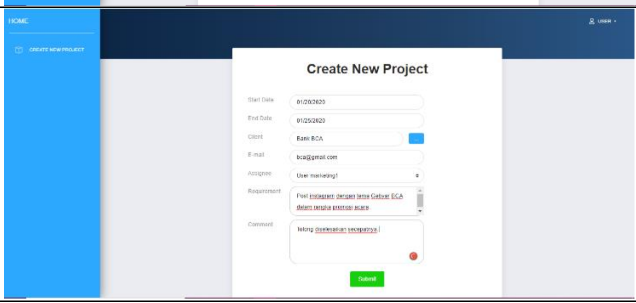
TC ID	Testing Proof
TC003	
TC005	

6.3.4 Sales Section

Table 6.7 Testing Scenario for Sales Section

No	Scenario	Expected Result	Evaluation
1	View homepage	Precondition : Sales already login. Sales could access homepage	As expected
2	Sales review project	Sales could review project and reassign user to do revision	As expected
4	Create new project	Sales could create new project and assigns marketing user.	As expected
5	View "In Progress"	Sales could see the detail of their In Progress task after choose on of the list	As expected
6	View "To Do"	Sales could see the detail of their To Do task after choose on of the list	As expected
7	View "Done"	Precondition : Sales already done the task. Sales could see the detail of their done task after choose on of the list	As expected

Table 6.8 Testing Result for Sales Section

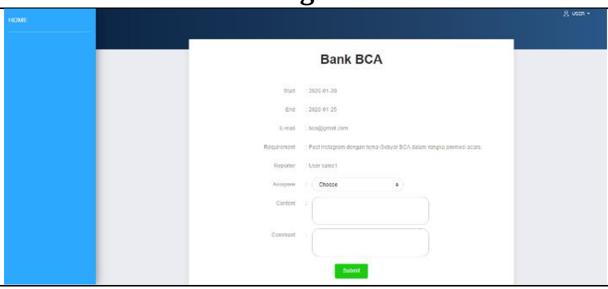
TC ID	Testing Proof
TC002	
TC004	

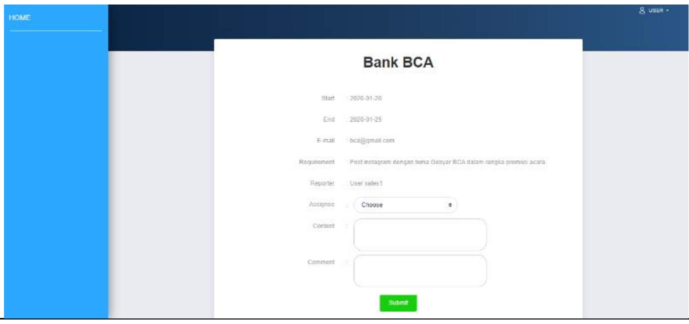
6.3.5 Marketing Section

Table 6.9 Testing Result for Marketing Section

No	Scenario	Expected Result	Evaluation
1	View homepage	Precondition : Marketing already login. Marketing could access homepage	As expected
2	View list of To Do, In Progress, and Done	Marketing could see the task of Marketing's To Do, In Progress, and Done	As expected
3	View "To Do"	Marketing could see the detail of the project that assigned to marketing.	As expected
4	Approve task	Marketing could approve the task, after that the task will be in "In Progress" list	As expected
5	Decline Task	Marketing could decline the task, after that the task will be in "To Do" list of the reporter	As expected
6	View "In Progress"	Marketing could see the detail of their In Progress task after choose on of the list	As expected
7	Input content field	Marketing could input content into content field	As expected
8	Assign Design user	Marketing could assigns Design user for the next step	As expected
9	View "Done"	Precondition : Marketing already done the task. Marketing could see the detail of their done task after choose on of the list	As expected

Table 6.10 Testing Result for Marketing Section

TC ID	Testing Proof
TC006	

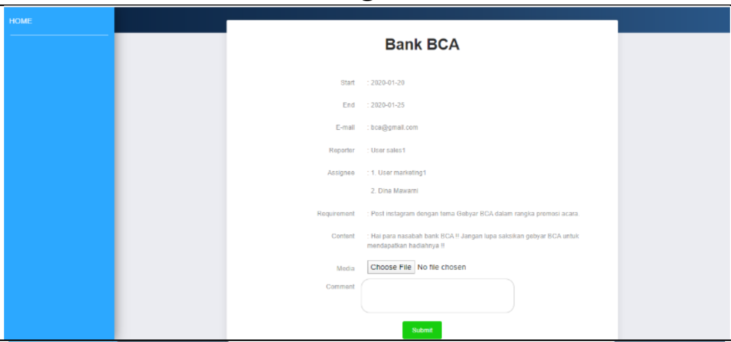
TC007	

6.3.6 Design Section

Table 6.11 Design Section

No	Scenario	Expected Result	Evaluation
1	View homepage	Precondition : Design already login. Design could access homepage	As expected
2	View list of To Do, In Progress, and Done	Design could see the task of Design's To Do, In Progress, and Done	As expected
3	View "To Do"	Design could see the detail of the project that assigned to design.	As expected
4	Approve task	Design could approve the task, after that the task will be in "In Progress" list	As expected
5	Decline Task	Design could decline the task, after that the task will be in "To Do" list of the reporter	As expected
6	View "In Progress"	Design could see the detail of their In Progress task after choose on of the list	As expected
7	Upload image format file on the media field	Design could upload the image file into media field.	As expected
8	Task assignation automatically	The assignation on the Design page will automatically to the project creator (Sales)	As expected
9	View "Done"	Precondition : Design already done the task. Design could see the detail of their done task after choose on of the list	As expected

Table 6.12 Testing Result for Design Section

<table>
<tr><th>TC ID</th><th>Testing Proof</th></tr>
<tr><td>TC006</td><td>
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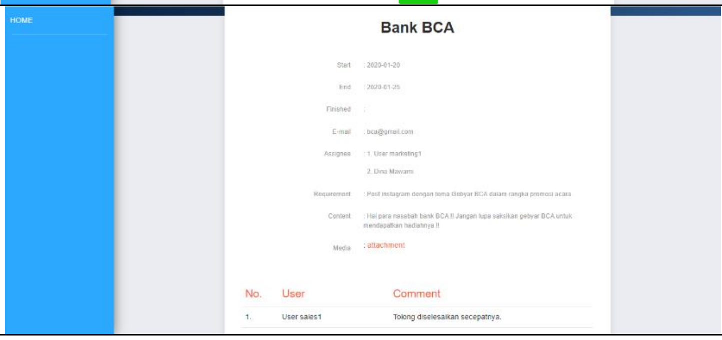
<tr><td>TC009</td><td>
</td></tr>
</table>

CHAPTER VII

CONCLUSION AND FUTURE WORK

7.1 Conclusion

There are several points that could be concluded from the development of Task Management System for Social Media Business in PT Tribun Digital Online:

1. The system helps users to communicate advertising progress issue among the teams and help to store all of the advertising component such as requirements, content, and image for visualization
2. The system helps Head of Advertising control and maintain the task progress through report menu.
3. The system provides notification for user and client to make the advertising activity faster and real-time.

7.2 Future Work

There are several suggestions to improve the system in the future. The things that can be developed for the improvement and future development as follows:

1. Once the project already done, it will automatically be uploaded to social media after send the brief to the email clients.
2. New user could request to create a new account but still be approved by Head of Advertising, so no need admin.

3. There should be more search classification to generate the Report for Head of Advertising.
4. On the report for Head of Advertising, should be a performance indicator so it could fullfill the key performance indicator needs.
5. On the homepage of the task list, there should be search filter and pagination to help user classified and search the specific task.

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