KATHMANDU UNIVERSITY

Department of Computer Science and Engineering

Dhulikhel, Kavre

A Mini Research Weekly Report (Week 1)

on

"Improving the UI/UX Design of Nepal Stock Exchange Trade Management System"

[COMP 341]

(For partial fulfillment of 3rd year/ 2nd semester on Computer Science)

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Weekly Task

1. Find a problem (case) to be solved in and around you. This can be your mini-research project.
2. Form a project team of 4 members.
3. Study the case that you have selected. Conduct a Literature Review which includes theories, concepts and related works
4. Conduct a survey with the targeted users of your project to justify the problem statement.

Task 1

Find a problem (case) to be solved in and around you. This can be   your mini-research project.

Our Work

For our mini-research project, we aimed to select a widely used website in Nepal that does not adhere to HCI principles. Consequently, we chose to focus on the NEPSE Trade Management System(TMS) website. Our goal is to address critical user interface problems that require immediate attention, ensuring the platform delivers the best user experience. Since the website is utilized daily by investors in the stock market, it is crucial for investors to feel comfortable while navigating it. Considering the sensitive financial information handled by the website, it is essential for the user interface to be user-friendly and easily accessible.

Problem statement

There are a lot of transactions occurring daily through the TMS website. The menus should be clear enough to distinguish between two menus. There should be proper spacing between two menus so that it will be easier to click one menu with accuracy. The NEPSE TMS website doesn't follow such HCI principles. So, we have selected it for our mini research project.

Task 2

Form a project team of 4 members.

We have formed a team of 4 members. Our team members are:

a) Aditya Chaudhary (10)
b) Shyarnis Ghising (17)
c) Abhinav Joshi (21)
d) Rujan Luitel (37)

Task 3

Study the case that you have selected. Conduct a Literature Review which includes theories, concepts and related works

Our Work

In this literature review, we will explore theories, concepts, and related works relevant to the Nepse TMS website. The Nepse TMS website serves as a crucial platform for stock trading and investment in Nepal. By examining existing literature, we aim to gain insights into the theoretical foundations, key concepts, and previous studies related to online trading platforms, user experience, and technological aspects of financial systems.

User Experience (UX) and Human-Computer Interaction (HCI) Theories:

a. **Technology Acceptance Model (TAM)**: TAM, proposed by Davis in 1989, explores the factors influencing user acceptance of information systems. It emphasises perceived usefulness and ease of use as primary determinants of user behaviour.

b. **User-Centred Design (UCD)**: UCD focuses on involving users throughout the design process to ensure a user-friendly and intuitive interface. It emphasises iterative design, usability testing, and user feedback.

c. **Information Foraging Theory**: This theory, proposed by Pirolli and Card in 1999, explains how users navigate through information spaces to satisfy their information needs. Understanding user information-seeking behaviour can help optimise the design of the Nepse TMS website.

Related Works

a. "User Interface Design for Online Trading Platforms" by Li and Zhang (2019): This study explores the design principles and user interface

considerations for online trading platforms, emphasising usability, information visualisation, and decision-making support.

b. "A Study on User Perception of Online Trading Platforms" by Chen and Lai (2018): This research investigates user perception of online trading platforms, including ease of use, security, and reliability. The findings provide insights into user expectations and preferences.

Conclusion

This literature review has highlighted theories, concepts, and related works relevant to the Nepse TMS website. User experience theories like TAM and UCD can inform the design process, ensuring the website's usability and acceptance. Previous studies on user interface design, and user perception of online trading platforms provide valuable insights for optimizing the Nepse TMS website. By incorporating these theories, concepts, and related works into the research project, we can enhance the understanding and improvement of the Nepse TMS website's functionality, and user experience.

Task 4

Conduct a survey with the targeted users of your project to justify the problem statement.

Our Work

We have shortlisted the questions for our survey. Then we have taken surveys from our targeted users. Our targeted users are:

- Investors in stock market
- CS Students with knowledge of stock market

We have taken surveys from 25 targeted users.

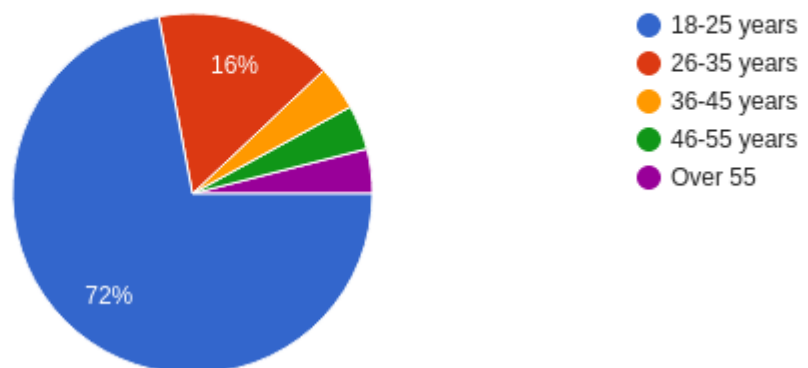The age group, gender and occupation of our targeted user is shown below:
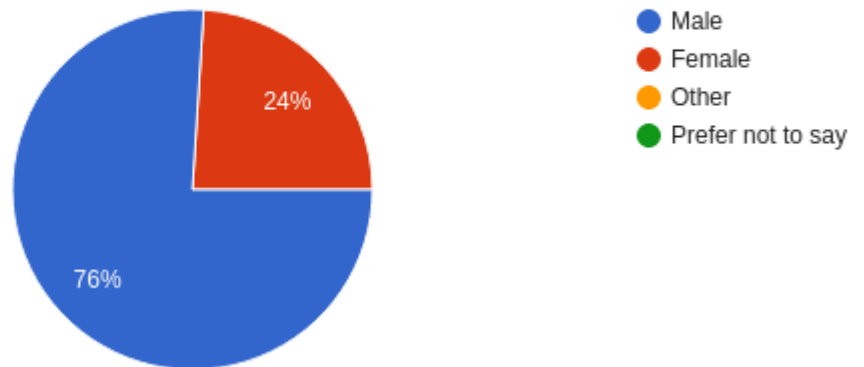
Age

25 responses

Figure 4.1.1 Age group of survey

Gender

25 responses

- ● Male
- ● Female
- ● Other
- ● Prefer not to say

Figure 4.1.2 Gender group from survey

Occupation

25 responses

- ● Student
- ● Government Employee
- ● Self-Employed
- ● Businessperson
- ● Entrepreneur
- ● Housewife
- ● Retired
- ● Private Sector
- ● Unemployed
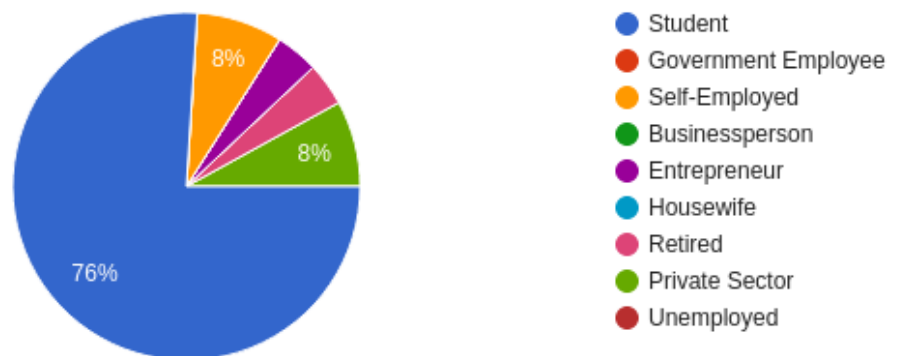
Figure 4.1.3 Occupation Group from a survey

Some of the questions that we have asked to our targeted users are shown below:
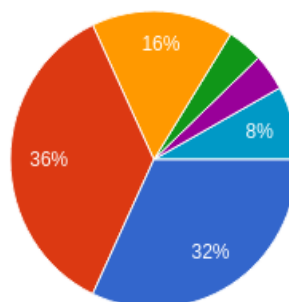
1.

How familiar are you with stock market?

25 responses
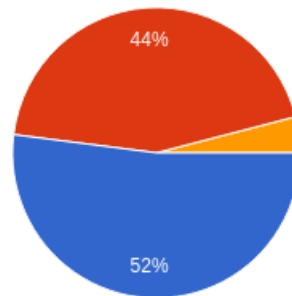
- Yes, I am familiar and use it frequently.
- I've heard about it but not used it.
- No, I haven't heard about it

44%
52%

2.

How much time do you typically spend on the Nepal Stock Exchange Trade Management System when using?

25 responses

- 5-10 Minutes
- 10-15 Minutes
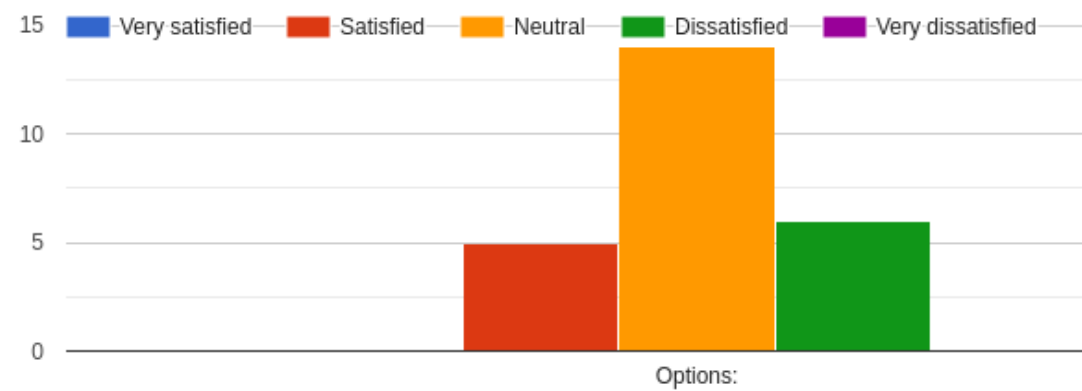- 15-20 Minutes
- 20-25 Minutes
- 25-30 Minutes
- More

16%
36%
8%
32%

3.

How easy is it for you to find the information you need on the Nepal Stock Exchange Trade Management System?
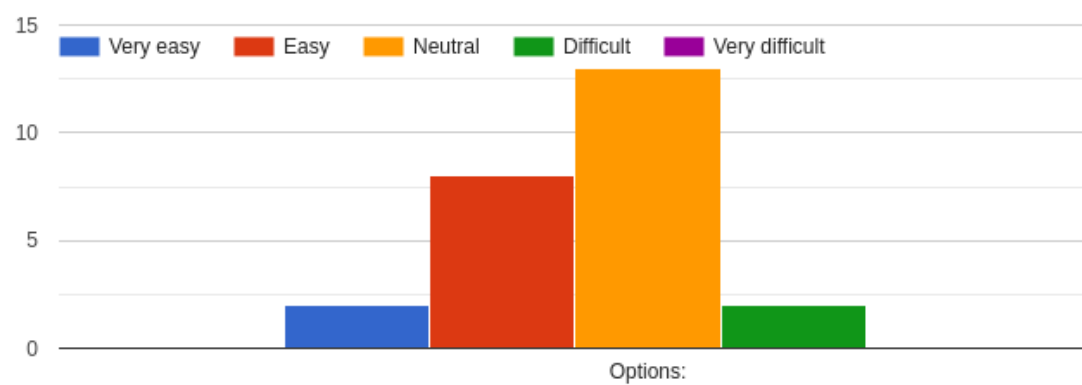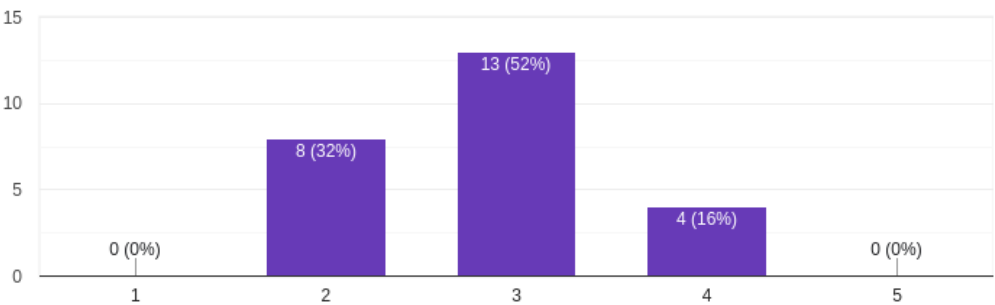

4.

How satisfied are you with the overall user interface of the Nepal Stock Exchange Trade Management System?

5.

On a scale of 1-5, how easy did you find to locate the features you were looking for on the website?
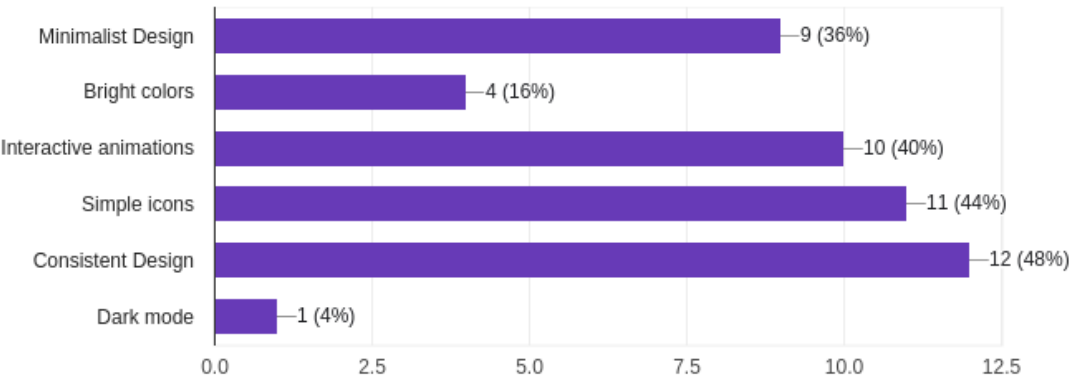
25 responses

6.

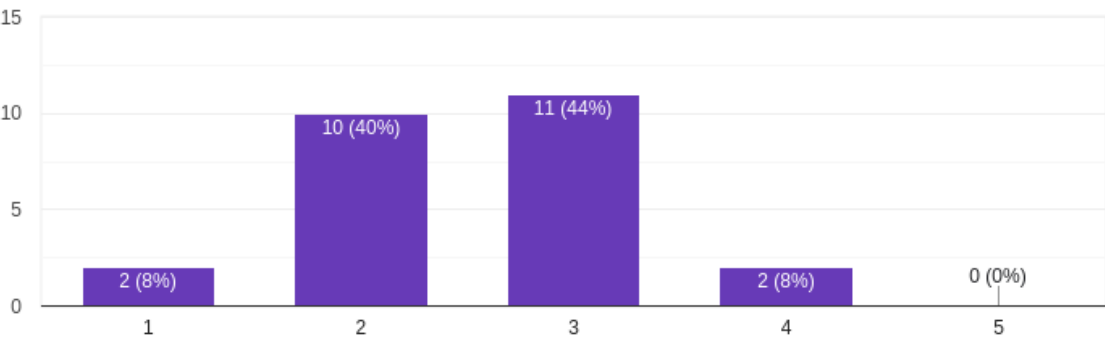What features do you think website is lacking?   Copy

25 responses

7.

On a scale of 1-5, rate the visual consistency and feedback of the website.
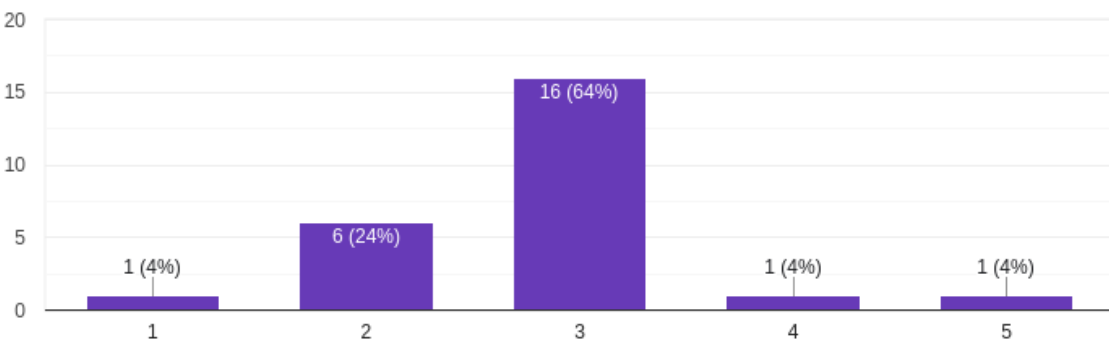
25 responses

8.

How would you rate the overall design of the website?

25 responses

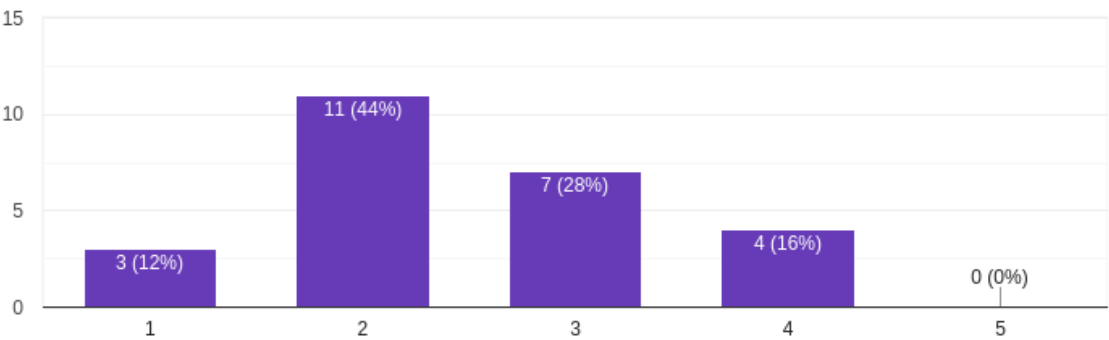
9.

I would need help of a technical person to use this website.

25 responses

10.

How likely are you to recommend the website to others on the scale of 1-5?

24 responses