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| Goal-Setting.jpg  Usability Evaluation  Task 2.8 | Goals   * Perform analytical usability evaluation * Perform empirical usability evaluation   Team  Oleksii Kyrylchuk 223224  Paulina Binas 220641  Tenzin Choewang 218890 |

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# Analytical Usability Evaluation

We have decided to use cognitive walkthrough and GOMS as our analytical usability evaluation methods.

The chosen user tasks will be:

* To inform their group members about their progress
* To access the system of GamePlan

## Cognitive walkthrough – Task 1

Goal: To inform their group members about their progress

Task description:

1. **What does the user want to achieve?**

Write a message to the members about their completed chores.

1. **Will the correct action be made sufficiently evident to the user?**

There is one possible correct action – press the “menu” button and then press the “group” button inside the “menu”. After that, the user’s message should be typed into the input field and confirmed with enter button.

1. **Will the user connect the correct action’s description with what he or she is trying to do?**

Yes, the naming of the buttons, especially the “group” button will enable the user to identify it as a method of contacting his/her group.

1. **Will the user interpret the system’s response to the chosen action correctly, that is, will the user know if he or she has made a right or wrong choice?**

When the user clicks the “menu” button, the system will respond by showing the pop-up menu and then after pressing the “group” button, the user will be presented with the group chat page. After typing in the messages and pressing enter, the user will see his/her messages in the chat box

## GOMS Family of Methods - Task 2

Goal: To create an account and log into the system

Comparison of two scenarios:

1. **A competent performer user**

Operator Sequence:

* Initiate the registration (Decide to do the task) H = 0.4
* Find the “register” button M=1.35
* Point to the “register” button P=1.1
* “Register” button will be clicked to start the registration process K=0.2
* Find the input fields M=1.35
* Point to the input fields P=1.1
* Three input fields will be filled with data (the user will use tab) K=0.2\*6
* Find the “create” button M=1.35
* Point to the “create” button P=1.1
* A “create” button will be pressed to create an account K=0.2
* Point to the “username” input P=1.1
* Click on the “username” input K=0.2
* Type in the username K\*10(avg) = 0.2\*10
* Click tab to enter the “password” input K=0.2
* Type in the password K\*8(avg) = 0.2\*8
* Find the “login” button M=1.35
* Point to the “login” button P=1.1
* User will press the “login” button K=0.2

Total time for a competent performer:

T = 0.4 + 1.35 + 1.1 + 0.2 + 1.35 + 1.1 + 0.2\*6 + 1.35 + 1.1 + 0.2 + 1.1 + 0.2 + 0.2\*10 + 0.2 + 0.2\*8 + 1.35 + 1.1 + 0.2 = 17.1 seconds

1. **An expert user**

Operator Sequence:

* Initiate the registration (Decide to do the task) H = 0.4
* Find the “register” button M=1.35
* Point to the “register” button P=1.1
* “Register” button will be clicked to start the registration process K=0.2
* Find the input fields M=1.35
* Point to the input fields P=1.1
* Three input fields will be filled with data (the user will use tab) K=0.2\*6
* Find the “create” button M=1.35
* Point to the “create” button P=1.1
* A “create” button will be pressed to create an account K=0.2
* Point to the “username” input P=1.1
* Click on the “username” input K=0.2
* Type in the username K\*10(avg) = 0.2\*10
* Click tab to enter the “password” input K=0.2
* Type in the password K\*8(avg) = 0.2\*8
* Find the “login” button M=1.35
* Point to the “login” button P=1.1
* User will press the “login” button K=0.2

Total time for a competent performer:

T = 0.4 + 1.35 + 1.1 + 0.2 + 1.35 + 1.1 + 0.2\*6 + 1.35 + 1.1 + 0.2 + 1.1 + 0.2 + 0.2\*10 + 0.2 + 0.2\*8 + 1.35 + 1.1 + 0.2 = 17.1 seconds

# 

# Potential Problems and Solutions

Problems:

1. The form inputs placeholders are not sufficiently visible due to low contrast
2. The register and login links are too small and not so visible especially to the older and novice users
3. Novice users might have problems finding the links to the components of the system since they are displayed only after clicking the menu button
4. The input field in group chat does not indicate its purpose, that is, typing in the message since there is no placeholder and no distinct background color.

Solutions:

1. Increase the contrast of login and register form placeholders
2. Increase the font-size of the register and login links
3. Give color contrast to the menu button, and also display the components in the navigation bar
4. Add a placeholder and give color contrast to the input field in the chat component

# Empirical Usability Evaluation

## Usability criteria and measures

#### Effectiveness

Percentage of tasks completed on first attempt.

#### Efficiency

Time taken on first attempt. Relative efficiency on first attempt

#### Satisfaction

Rate of voluntary use

## Test Users

### User 1

**Age:** 3X

**Occupation:** Instructor

**Gender:** Male

## Performance of tasks

### Scenarios

**Task 1** – Login into the GamePlan

**Task 2** – Edit today’s event – change its repeating days and add description

**Task 3** – View today’s tasks and add “wash the dishes” task to be done today

**Task 4** – Buy a smile emoji from the shop

**Task 5** – Send a message to your group about having washed the dishes

**Task 6** – Add your sister to the group chat

### Results

## Analysis of results and comparison with the criteria