CPSC 4910/4911, Spring 2022
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USABILITY TESTING

The primary purpose of this exercise is to perform a usability test on your CPSC 4910/4911 project. You will introduce your system to a group of your peers (users), run those users through a series of tasks, and assess your system on common usability metrics.

When executed thoughtfully, usability testing can provide critical insight on a variety of usability metrics, including task completion rates, time-on-task, critical and non-critical errors, and problem severity.

The assignment is most effective when one member of the team facilitates the testing (in a professional setting, this is often the product owner). The role of the facilitator is to:

- Introduce the system and provide relevant background information
- Determine which user will perform each task
    - You should switch users based between scenarios
- Coordinate task observation, note-taking, and scoring

The facilitator should be a member of them whose product is being tested.

Please read the rest of this document before you begin your testing session.

This assignment is based on information obtained from the U.S. Department of Health and Human Services. Further guidance and more detailed information can be found at https://www.usability.gov.

Team being evaluated: 2
Users: 7

Not every team will be ready to test every task scenario. This is not a competition to rate each other's performance. This is a real-world exercise in Usability Testing intended to give your team feedback…not judgment!!

TASK SCENARIOS

One user will perform each of the task scenarios outlined below. The remaining users, and all members of the team being evaluated, will observe, score, and take notes. These tasks have been designed to support our goals and guidance given for the final product.

NOTE to the user: it is important that you try your best to complete each task scenario as described, without assistance. It is helpful if you talk aloud while you are performing the task. If you get stuck, the facilitator will help you get on track.

NOTE to the facilitator and observers: use the information and tables in **Appendix I** to document problems, concerns, code bugs, and procedural errors while the user is performing each task.

Read each scenario closely and break it down into the tasks necessary to complete the task and record them in the table, even if the product is not yet ready to execute every task. The tasks for the first scenario are completed for you as a model for the remaining scenarios. There are too many scenarios to complete in the time available. Your goal is to complete the first 3 scenarios as completely as possible. Then, move on to the remaining scenarios and complete them as time allows. Feel free to skip scenarios that are known to be unready for testing.

The following scenarios assume one pre-existing sponsor account and one pre-existing admin account in the system. Usernames and passwords for these accounts should be on hand and ready prior to starting the session.

Team test assignments will be available in class.

One team will provide the users today and the paired team will be the test product. We'll reverse the rolls and perform the same tests next class. Your choice on which team does what which day. Allow time for the facilitator to collate observer notes into 1 document which will be turned in for the team under test at the end of class. **At the end of class, the facilitator will submit the consolidated document for the team under test.**

Appendix I: Usability Testing Metrics and Score Sheets

Use the following information and tables to document problems, concerns, code bugs, and procedural errors while the user is performing each task. Each metric is described below.

USABILITY METRICS

Scenario Completion

For each task scenario, the user must input specific data (like a username or password) or obtain specific results (like producing a report or purchasing a product). The user will indicate when they believe the goals of the scenario have been met, regardless of whether the user was successful or unsuccessful in their attempt.

Critical Errors

This type of error occurs when a user is not able to complete the task scenario independently or does not produce the correct outcome (the user may not be aware of this error). For example, a critical error would be noted if the user cannot find the correct page on their own or the user produces a report with inaccurate data.

Non-critical Errors

This type of error occurs when a user can recover from an error independently. For example, a non-critical error would be noted if the user does not take the optimal path (excessive keystrokes or steps) but completes the task scenario, or if the user attempts to edit an un-editable field.

Scenario Completion Time (time on task)

Time on task is the time it takes for a user to complete a specific task scenario. You may choose to track this metric or not, depending on your needs.

Problem Severity

Problem severity is a rating scale based on the intersection of two measures: impact and frequency.

Impact

- High (critical error): prevents the evaluator from completing the task
- Moderate (non-critical error): causes difficulty, but task can be completed
- Low (non-critical error): does not significantly affect task completion

Frequency

- High: 30% or more evaluators experience the problem
- Moderate: 11 - 29% of evaluators experience the problem
- Low: 10% or less experience the problem

Severity classifications are applied as follows:

- Severity 1: High impact/High frequency
- Severity 2: Moderate to low impact/Moderate to high frequency
- Severity 3: Moderate impact/Low frequency -or- Low impact/Moderate frequency
- Severity 4: Low impact/low frequency

Driver Scenario #1

As a new driver, you will create a new account with a password and log in to the system. You will then navigate through the system to change or update your personal information and log out of the system.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4) (1-4) (1-4)
Create new account	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Log into system using new account	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Navigate to personal information	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Update and save personal information	N	Y	Critical	3
Notes/detail on error observed: Works if you enter both user and password but not one or the other				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Log out of system	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Notes/detail on error observed:				

Sponsor Scenario #1

As a returning sponsor, you will log in to the system with your password. You will then navigate through the system to accept the driver account created in Driver Scenario #1 and assign 100 points to the driver account. You will then log out of the system.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log in as sponsor	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Navigate to driver applications	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Accept a driver	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Assign 100 points	y	n		
Notes/detail on error observed: Points not added in table				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log out	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				

Admin Scenario #1

As a returning admin, you will log in to the system with your password. You will then navigate through the system to create a new sponsor, add this sponsor to the driver created in Driver Scenario #1, and log out of the system.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log in as admin	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Create a new sponsor	N	Y	non-critical	3
Notes/detail on error observed: Cannot add a new sponsor				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Add sponsor to driver created in Scenario 1	Y			
Notes/detail on error observed: can't add sponsor to driver				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Log out	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Notes/detail on error observed:				

Driver Scenario #2

As a returning driver, you will log in to the system and change your password. You will then navigate through the system to view the number of points you have accumulated (should be 100), browse through your sponsor's catalog, and purchase a product. You will then log out of the system.

NOTE TO OBSERVERS: make a note of the product purchased and total number of points used. Also note overall impressions of catalog (appearance, ease of use, etc.).

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Login as driver	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Change password	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
View number of points accumulated	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Browse catalog	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Purchase product	N	N		
Notes/detail on error observed: points are deducted but order is not functional yet				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log out	Y			
Notes/detail on error observed:				

Driver Scenario #3

As a returning driver, you will log in to the system with your password. You will then navigate through the system to review your order, determine the status of your order, and track your purchase. You will then check your point balance and log out of the system.

NOTE TO OBSERVERS: make a note of order details and account balance. Also note overall impressions of account page (appearance, ease of use, etc.)

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log in as driver	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Review order	N			
Notes/detail on error observed: not completed				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Determine status	N			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Track order	N			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Check point balance	Y			
Notes/detail on error observed: points are deducted				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Log out	Y			
Notes/detail on error observed:				

Sponsor Scenario #2

As a returning sponsor, you will log in to the system with your password. You will then navigate through the system to add a product to your catalog and view this new product in the catalog as the driver from Driver Scenario #1. You will then generate one report (report names will be different for each team) and log out of the system.

NOTE TO OBSERVERS: make a note of new product information.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Login as sponsor	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
add a product to catalog	N	Y	non-critical	3
Notes/detail on error observed: product does not show; image url should not be required				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
View new product as driver	N	Y	non-critical	3
Notes/detail on error observed: product did not show because we needed a custom image				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Generate report	N			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Log out	Y			
Notes/detail on error observed:				
Task	**Completed (Y/N)**	**Errors (Y/N)**	**Critical or non-critical**	**Severity (1-4)**
Notes/detail on error observed:				

Driver Scenario #4

As a returning driver, you will log in to the system with an incorrect password. You will then retrieve or change your password following system prompts. You will then navigate through the system to view changes in sponsorship and log out of the system.

NOTE TO OBSERVERS: make a note of all driver sponsors (should be 2)

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Login with incorrect password	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Change password	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
View changes in sponsorship	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log out	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				

Admin Scenario #2

As a returning admin, you will log in to the system with your password. You will then navigate through the system to change the fee ratio for one sponsor. You will then view the system as the sponsor account created in Admin Scenario #1, and as the driver account created in Driver Scenario #1. You will then resent the password for the driver account created in Driver Scenario #1, and log out of the system.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Login as admin	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Change fee ratio for sponsor	N			
Notes/detail on error observed: not implemented				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
View system a sponsor	Y	Y	non-critical	2
Notes/detail on error observed: An admin in the driver view can add to catalog. Cannot view as specific driver				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Reset password for the driver account	N	Y	Critical	4
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Log out	Y			
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				

Admin Scenario #3

As a returning admin, you will log in to the system with your password. You will then navigate through the system to generate all reports available to you (report names will be different for each team). You will then create a new admin account, delete the sponsor account created in Admin Scenario #1, and delete the driver account created in Driver Scenario #1.

Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				
Task	Completed (Y/N)	Errors (Y/N)	Critical or non-critical	Severity (1-4)
Notes/detail on error observed:				

OTHER SCENARIOS AS NEEDED