ITEC 3230 - Final Report
Dressing Dynasty Retail App

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ITEC 3230 A - Designing User Interfaces

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1. Requirements

1.1 Overview

This app is called Dressing Dynasty. It collects a series of information from the user to generate a variety of stores the user can shop for (online/in-person) to satisfy their outfit requirements. User's location is an example of the information DD collects; this is to provide users with the option to easily walk into these stores locally and physically browse and try on outfits.

       Some stakeholders are customers, the stores partnered with our app, UPS delivery service (for online orders), software development team, project manager, project sponsor (funding this project), web development and design team, and the associates preparing and packaging orders.

1.2 User Characteristics

User and Stakeholder Characteristics:

User Type	User	Characteristics
Primary	Males ages 16-65	**Education:** At least high school for: → basic computer literacy → personal money for shopping **Environment:** → Shop from home → Elderly feasibility → Student time saving **Computer Expertise:** → Naive/Basic
Primary	UPS Delivery Service	**Education:** At least high school for: → basic computer literacy **Environment:** → Driver's licence → Road navigation → Delivery efficiency **Computer Expertise:** → Naive/Basic
Primary	Retail Store Employee	**Education:** At least high school for: → basic computer literacy

		Environment: → Accurate package creation → Completed with time efficiency **Computer Expertise:** → Naive/Basic
Tertiary	Female Customers	**Education:** At least high school for: → basic computer literacy → personal money for shopping **Environment:** → Shop from home → Elderly feasibility → Shop for male (dad, boyfriend, etc) **Computer Expertise:** → Naive/Basic
Tertiary	Parents	**Education:** At least high school for: → basic computer literacy **Environment:** → Shop from home → Elderly feasibility → Shop for dependant children **Computer Expertise:** → Naive/Basic
Secondary	Retail Store Managers	**Education:** At least high school for: → basic computer literacy **Environment:** → Managing store and employees → Collecting record of monthly online sales **Computer Expertise:** → Naive/Basic

1.3 User Requirements

Use Case Name	Browse the categories
Participating Actors	Customer
Flow of Events	1. The SYSTEM displays categories on the homepage. 2. The user clicks the categories. 3. The SYSTEM displays options such as Trending and hats. 4. The user clicks the Trending. 5. The user clicks Scroll down the screen to browse through options.
Precondition	System displays all of the items.
Postcondition	System displays all categorical items.
Quality	System should display the options within 1 seconds. System should display the list of items which are selected within 1 seconds.

Use Case Name	Add an item to favourites
Participating Actors	Customer
Flow of Events	1. The SYSTEM displays heart icon next to item 2. The user clicks the heart icon. 3. The SYSTEM displays a filled heart and adds it to the favourites page. 4. The user clicks the favourite page. 5. The SYSTEM displays the user's favourite item which is added.
Precondition	System shows an empty heart icon next to the item.
Postcondition	System shows a filled heart and displays the favourite item in the favourites page.
Quality	System should fill the heart icon within 1 seconds. System should add favourite items in the favourites page within 1 seconds.

2. High Fidelity Prototype

Please click HERE to view the short walkthrough of our high-fidelity prototype.
Alternatively, you can click this link or paste it in your web browser:
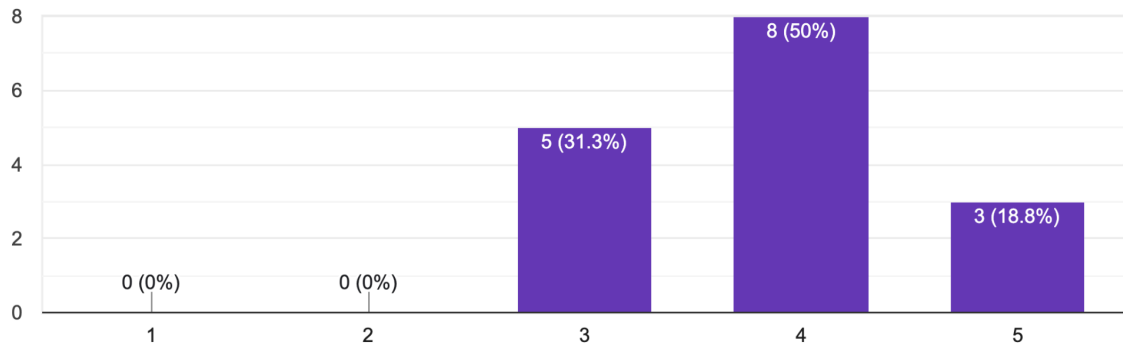https://www.youtube.com/watch?v=LKRcO0VXiBg

3. Phase I Evaluation

a). Quantitative Data:

On a scale from 1 to 5, how satisfied are you with our app.

16 responses

- **31.3%** of respondents rated the app as 3/5.
- **50%** of respondents rated the app as 4/5.
- **18.75%** of respondents rated the app as 5/5.

Quantitative Analysis:

- Of the 16 respondents, **68.75% (11 people)** rated the app with a score of 4/5 or 5/5, which shows that more than half of the respondents loved our app.
- However, **31.3% (5 people)** of respondents rated it as 3/5, suggesting that there is room for improvement to address concerns or issues.

b). Qualitative Data:

1. Visibility of System Status:
- Strong point: "Ease of access" suggests good visibility.
- Weak point: "No way to try it on." This is inapplicable because it's an online retail app.

2. Recognition rather than Recall:
- Comment about confusion in undoing an accidental tap/click highlights a potential issue with recall.

3. User Control and Freedom:
- The mention of confusion in undoing actions means that there needs to be better user control.

4. Consistency and Standards:
- Positive feedback about how good the walkthrough and conceptual model is.

5. Error Prevention:
- Confusion in undoing taps/clicks may suggest a need for improved error prevention measures.

6. Flexibility and Efficiency of Use:
- Strong points include "clear simplicity," "easy navigation," and "location feature," indicating efficiency and flexibility.

7. Aesthetic and Minimalist Design:
- Positive feedback on "design clarity/simplicity" demonstrates aesthetic design principles.

8. Help Users Recognize, Diagnose, and Recover from Errors:
- Mention of incomplete details and confusion in undoing actions can be potential issues in error recognition and recovery.

9. Help and Documentation:
- Positive feedback on the conceptual model and walkthrough shows that there is good help and documentation.

10. Match between System and the Real World:
- Positive feedback on the conceptual model.

c). Table:

Comments from Questionnaire / Verbal Feedback		
Quote	**Nielsen Category**	**Response**
"No cart or search function"	Flexibility & Efficiency of use	Since it's an essential feature, we added an 'add to cart button' and a search bar.
"Confusing to undo an accidental tap/click"	**1.** User Control & Freedom **2.** Error Prevention **3.** Help Users Recognize, Diagnose, and Recover from Errors **4.** Recognition rather than Recall	To mitigate this, we made sure that by clicking the same button, it will undo/redo the previous action.
"No way to see what you have liked"	Visibility of System Status	After liking an item, it gets highlighted pink and instantly goes into your favorites list.

4. Phase II Evaluation

4.1 Overall Evaluation Design

The goals of our 2nd stage evaluation are:
1) **Simplicity:**
    i). Measure the amount of clicks or taps required to make a purchase. A lower amount signifies a simpler user experience.
2) **Efficiency**
    i). Measure the average transaction time from product selection to payment completion. A lower time suggests that users are able to efficiently use the app
3) **Learnability**
    i). Measure the time taken for **NEW** users to perform basic tasks without assistance. A lower time signifies that the interface is easy to learn.
    ii). Measure error rates during interactions. A low error rate suggests that users are able to effectively navigate through the app

4.2 (Hypothetical) Field Study

i). **What** are you evaluating?
    We are evaluating our goals of simplicity, efficiency, and learnability. This will be through the measurement of user actions and time taken to perform specific tasks

ii). **Where/How** would it be conducted?
    Users will be given the ability to install our app on their phone, allowing them to use our app anywhere. However, it is recommended that they use the app while they are at home, as that is usually the most common/natural setting people are in when shopping online.

iii). **Who** would participate?
    Although our app is targeted towards men ages 18 and up, this study is open to all men of any age with low and high online shopping experience, and with low and high technical skills. Because we are testing for simplicity, efficiency, and learnability, having different users with different online shopping and technical experiences allow us to test for each goal.

iv). **How long** would it take?
    This study should roughly take 1 to 2 weeks. This whole process includes the time it takes for users to complete their given tasks and for us to acquire and review the data through our data acquisition techniques mentioned below.

v). **What** data would you collect and **how**?

   We would be collecting data on the number of taps or clicks it would take to complete common tasks, and we would conduct user surveys to get their perceived simplicity of our interface. We will also be collecting the time it takes for users to complete important tasks such as product selection and payment completion. To do this, heatmaps will be used to collect data on their interaction patterns, and with that we can see which areas we can improve on. Along with heatmaps, we will be conducting user interviews as well. This will provide us qualitative data that will give us some insight into the user experience, user preferences, and find out what areas of our interface users had challenges with.

vi). **What** analysis would you do with the data?

   We will be doing a mix of quantitative and qualitative analysis with our data. We will be collecting statistical data such as the average amount it taps/clicks it takes to complete common tasks and average amount of taps/clicks it takes to complete key tasks such as production selection and payment. A qualitative analysis will be taken as well through the use of satisfactory scales to see users' opinions on the simplicity, efficiency and learnability of our interface.

4.3 Usability Experiment

4.3.1 Experimental Design

Describe your experimental design as follows (2-3 sentences max each point).

i. What are you evaluating (goals taken from 4.1).

   - Efficiency, learnability

ii. What are the independent variables of your experiment?

   - Independent variable: Adding filter feature to sort the list of item or no
     So, A is not Using Filters and B is using filters

iii. What are the dependent variables of your experiment? Answer specifically and associate each dep. variable with an evaluation goal of (i) above and criteria you discussed in 4.1.

   - Dependent variable: the accuracy and speed of search results based on the use of filters

iv. What experimental design are you considering among: within-subjects, between-subjects or matched-participants?

   - Within-subject is more fit for our experiment because we compare the same participants in both cases, one where they use filters and another where they do not

v. What is a drawback (a confounding factor) that comes with your choice in (iv) and how do you deal with it?

Confounding factor: Some users may have previous experience using various filters or they may be familiar with the functionality.

Solving: Split the participants to ensure each group has a similar level of prior experience with filter usage. Then counter-balancing to neutralize ordering effects.

vi. What is the procedure/treatment i.e. what are your subjects supposed to do based on the design of choice?

In A condition, participants search it without a filter feature and then do it again with a filter feature.
In B condition, participants search it with a filter feature and then do it again without a filter feature.

vii. What shall be measured (times, self-report etc). Data must include both quantitative and qualitative. Here are ideas:

- Quantitative data: Time to complete to search an item without a filter feature
                      Time to complete to search an item with a filter feature
                      Number of users completing search successfully.

- Qualitative data: their body language and facial expression (Expressions of frustration, dissatisfaction, confusion, hesitation), open-ended questions which are asking to use a filter feature is useful.