NOVA SCHOOL OF
SCIENCE & TECHNOLOGY

Interação Pessoa-Máquina

2024/2025

Troca Tintas

Stage 2: User and task analysis

Authors:

69273, Rodrigo Neves
70730, Rodrigo Correia
70731, Carlos Pereira
70750, Rafael Costa

Lab class Nº P2

Group Nº 16

Professor:
Teresa Romão

October 2024

Problem Description

Currently, miniature painters, especially those involved in tabletop wargames like Warhammer, face difficulties when selecting and comparing paints and inks across various brands. Existing platforms that offer these services are limited, often focusing on specific brands, and lack user-friendly features. This restricts both novice and experienced painters who use multiple brands or want better guidance in their paint selection. Beginner painters frequently purchase incorrect or unnecessary paints, leading to wasted time and money.

Our project, *Troca Tintas*, aims to fill this gap by creating an accessible platform that compares paints across distinct brands, provides painting scheme examples, offers a 3D model viewer for testing paints, and generates personalized color plans for shopping. By addressing these challenges, *Troca Tintas* will streamline the process for all user levels and help eliminate the frustrations painters currently face.

User Analysis

The target users for **Troca Tintas** are miniature painters, particularly those involved in tabletop wargames like *Warhammer*. However, the platform is scalable for other miniature-based games like *Dungeons & Dragons* or for general model-building enthusiasts. Users are divided into the following classes:

- **Beginners**: Hobbyists new to miniature painting who require guidance in choosing paints and want easy-to-navigate tools for comparing colors and planning their purchases. Readability and ease of use are key features for these users, as they do not have a lot of experience;
- **Experienced painters**: Seasoned painters looking to streamline their processes, compare paints across brands, and experiment with new color schemes. As these users know what they want, and how do they want it, things that help streamline and organize are key for them;
- **Wargame players**: These users typically want a platform that provides quick and effective solutions for comparing paints and managing their painting projects for their miniatures, due to the need for their miniature to be painted to play the games they desire. So, giving good suggestions, in the least amount of time possible is important for them.

Task Analysis

1. Paint Comparison Across Brands allowing users to review and comment

- **Goal:** Provide users with an easy-to-use interface to compare paints from multiple brands.
- **Pre-conditions:**
    - The paint and brand are selected and shown to the user
- **Subtasks:**
    - Display a list of available paint brands.
    - Filter or search for specific paints by color or brand.
    - Presenting the comparison results in an intuitive layout (e.g., grid, table).
    - Add a review/comment under a paint/brand.

2. Paint Scheme Browsing based on miniature examples

- **Goal:** Allow users to browse paint schemes for miniature models.
- **Pre-conditions:**
    - Users access a gallery of painting schemes.
- **Subtasks:**
    - Display a gallery of miniature models with different paint schemes.
    - Enable filtering by categories (e.g., model type, paint brand).
    - Allow users to click on a model to view details or zoom into specific areas.

3. Paint Suggestion Tool based on the model selected

- **Goal:** Suggest paints based on a picture of a model uploaded by the user.
- **Pre-conditions:**
    - Users upload a picture of their model or select one of the models provided by the site.
- **Subtasks:**
    - Upload a model image or select a model.
    - Analyze the colors in the image (via backend processes).
    - Display suggested paint colors next to the model.
    - Allow users to adjust suggestions (e.g., brightness, contrast).

4. 3D Model Viewer that can be rotated and digitally painted

- **Goal:** Enable users to paint 3D models digitally and preview their results.
- **Pre-conditions:**
  - User selects a 3D model from a library.
- **Subtasks:**
  - Select a 3D model to interact with.
  - Rotate, zoom, and apply different paints to the model in real-time.
  - Save the painted model or reset to default.

5. Color Planner and Shopping List Generator

- **Goal:** Help users plan colors for their project and generate a shopping list.
- **Pre-conditions:**
  - User chooses paints from the comparison or suggestion tools.
- **Subtasks:**
  - Add selected paints to a shopping list.
  - Review and organize the shopping list (e.g., quantity, brand).
  - Export or print the shopping list.

Scenarios

Scenario 1: Paint Comparison and Review

John, an experienced Wargame player wants to compare different shades of red from various brands before starting his latest project. He logs into *Troca Tintas*, selects red as the color, and filters by Citadel and Vallejo paints. The platform displays a side-by-side comparison in a grid format, allowing him to see the subtle differences between the shades. John, a painter that really likes highly pigmented paints, which are noticeably harder to work with, but with good skill, a lot more flexible, decides to leave a comment under one of the paints, warning others that it is best for experienced users. Afterwards, he adds the chosen paints for his new army to his shopping list, to take it to his next hobby store visit.

Scenario 2: Paint Scheme Exploration for a New Model

Anna, a beginner hobbyist, is painting her first *Warhammer* miniature and feels unsure about where to start and how to choose a color color scheme. She accesses the paint scheme gallery on *Troca Tintas* and filters by her model type and Citadel paints. After scrolling through various schemes, she finds one she likes and clicks on the model to zoom in and examine the colors closely. Inspired, she adds the colors used in this scheme to her shopping list with a click of a button and then gets several links, for her to be able to get to the relevant storefronts.

Scenario 3: Color Planning and Shopping List Generation

Rafael, a returning painter that left the hobby a couple of years ago, uploads a photo of one of his older models , from which he forgot what paints he used and wants to paint others in the same tone, and uses the paint suggestion tool to analyze its current colors. The tool provides a list of paints that match his model's current colors. Satisfied with the suggestions, Rafael then decides to use the 3D Model Viewer to adjust the brightness of the suggested yellow to a deeper shade, as he feels would improve the new models. He adds all the selected paints to his color planner, generating a shopping list for his next trip to the hobby store.

Interviews

User 1: CyB3r (New Warhammer Player)

- **Challenges:** As a beginner, CyB3r finds it difficult to navigate the wide variety of paint brands. He often buys unnecessary paints due to a lack of knowledge, resulting in wasted time and money.
- **Key Needs:** CyB3r would benefit from a tool that guides him through color selections and suggests paints based on popular models. Additionally, he expressed a desire to preview colors before making purchases, indicating that an intuitive, visual comparison tool would reduce confusion.
- **Observations:** CyB3r struggled when attempting to cross-compare paints from various brands manually. His uncertainty in paint choices resulted in hesitation, and he often sought advice from more experienced painters. This demonstrates a clear need for an easy-to-use, guided system tailored to beginners.

User 2: Drago (Wargame-Focused Player)

- **Challenges:** Time efficiency is Drago's main concern. He spends too much time trying to compare paints and find quick solutions for color matching that align with his wargame army's theme.
- **Key Needs:** Drago's primary requirement is a paint comparison tool that allows him to quickly browse and select paints. The ability to filter paints by specific categories (e.g., color, brand) and compare them in a clear, visual format would significantly streamline his workflow.
- **Observations:** During the session, Drago demonstrated a preference for speed and simplicity in his tasks. He avoided complex or lengthy processes, focusing on tasks that would get him back to painting quickly. This observation reinforces the importance of a fast, efficient user interface with minimal steps for experienced wargame players.

User 3: LISAN al GAT DRIP (Painting-Focused Wargame Gamer)

- **Challenges:** LISAN al GAT DRIP, as an experienced painter, needs to experiment with paints from various brands and often mixes colors to achieve specific effects. His biggest challenge is finding paints that meet his

artistic standards and accurately visualizing how they will appear on miniatures.

- **Key Needs:** LISAN al GAT DRIP would benefit from a tool that allows for in-depth paint comparisons, previews, and testing. A 3D model viewer where he can digitally paint and rotate the miniature would enhance his ability to experiment with unusual colors before committing to a purchase.
- **Observations:** While painting, LISAN al GAT DRIP frequently paused to evaluate his color choices, checking various lighting conditions to see the effects. His reliance on visual assessment tools emphasizes the need for a 3D paint preview feature, allowing painters to evaluate colors in different scenarios and save time during the planning phase.