

Druge: Description & Specifications

1. Addressed Problem:

- The senior demographic often struggles with using computer applications; they are unable to understand the features of even the most basic programs such as Word, Excel, and Paint. This project will address this problem by creating a user-friendly drawing program that will allow seniors to express their creativity to the fullest.
- The program will have a main canvas that the users can draw on, which is white by default.
- The program will include a sidebar with simple features such as drawing, erasing, changing colors, switching background colors, changing line thickness, and saving images.
- At the end of each session, the image will be automatically saved to the program folder.
- This program will be released to the public for free after the project is completed.
- The program will have the option to include a password for accessing each drawing for the sake of security.
- The program will also have a tab that displays all the current artwork that has been created.

2. Problem Analysis:

- Input Questions:
 - What color would the user like to draw in?
 - How thick does the user want the paint brush to be?
 - Which sections would the user like to erase?
 - What color would the user like the background to be?
 - Would the user like to save the picture he or she has just drawn?
 - Does the user want to opt-in to a user verification process for their drawings?
 - Where is the user input coming from?
 - Every feature will be implemented with just mouse-input as the keyboard can be difficult to use for seniors.
 - Where is all the settings information and previous drawings coming from?
 - All previous data will be extracted from a data file
- Processing Questions:
 - How will we change settings such as color and thickness for the user?
 - When the user presses on the setting he or she wants, the input will be processed by the program and switch the setting via alternating lines in a data file.
 - How will the user verification work if the user would like to attach a password to their drawings?

- The user will be prompted to choose a password and the information will be stored in a data file as it is entered.
- How will the drawings be placed on the canvas?
 - The tkinter library contains a drawline feature that enables lines to be drawn onto the canvas with various settings such as color and thickness.
- Output Questions:
 - What are we outputting?
 - We are outputting a main user-interface that contains a sidebar for settings and a canvas for drawing.
 - We will also be outputting previously drawn images when prompted.
 - How are we outputting the information?
 - We are outputting the information through the monitor screen to the user. Saved images will also be exported to the program folder.

3. Program Specifications:

- Allow the user to comfortably draw on a blank canvas.
- Allow the user to conveniently choose various drawing settings in a simple interface.
- Allow the user to save and display their drawn images.
- Allow the user to opt into a user-verification system.