

Accessible Art User Manual

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Group 10

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I. Abstract

This is the user manual for the Accessible Art digital drawing software. This program is a refined artistic software with an emphasis on a clear and straightforward user experience. One can create on Accessible Art any sort of painted or drawn piece, without the complications of unnecessary features on a regular design program.

To get started, the application must first be downloaded from the code repo. Accessible Art was created using a program called Processing. This must be downloaded first, at <https://processing.org/download/>. The code to run the application must then be downloaded at the github repo link, which can be found in the appendix. The user then presses “CODE” and “Download Zip” to add the code onto the computer. To run the program, successively open and press “illustratorExtensions”, “drawSoftware” and “drawSoftware.pde”. Ensure that the play button is pressed once the Window opens. The program is ready to use.

All drawing settings are found at the bottom of the user interface. On this bar, the color and thickness of the utensil is easily chosen and changed to create hassle free drawing. Clicking on the desired color and thickness using a mouse or compatible pencil sets the program ready to begin making lines on the blank canvas. Unwanted parts can be removed by clicking on the eraser option and dragging the cursor over the areas that need to be removed. This will erase using the thickness last used to draw. With these tools, any work can be created and edited until the final product is achieved.

All pieces created with Accessible Art are easily savable. When satisfied with the work, the save option, also located on the bottom toolbar, is to be pressed. This saves the work to the computer’s local hard drive in the same file as the drawing software itself.

This is all that is required to set up, create and save any design on Accessible Art. As is the program’s specification, this process can easily be complete without the usual hassle or stress from working with an overwhelming program.

II. Introduction

Accessible Art is a drawing software that allows artists and those alike to create art at their leisure. The purpose of this program is to make art accessible and able-friendly. It allows for everyone - including those who experience fluctuating limitations whether they be physical and/or cognitive challenges to produce art. This particular style of software needs to exist in the market since it is very simplistic and contains all the important features necessary for creating digital art while eliminating the complex parts that can be challenging to learn and apply. While the target market for this software is those with disabilities that prevent them from using the complicated photoshop illustrators that exist, it can be useful to anyone who wants to create art and finds other options that currently exist to be technologically challenging. It is a simple software that allows for those pursuing art for the first time to have an easy start. The unique value proposition of this software is that its sole focus is drawing. Instead of photoshop features that crowd the screen, and are used for editing pictures. These are not required for those whose purpose is to simply create art on the computer to mimic hand drawn art. Additionally, the program is solely software, there are no hardware resources required. This has allowed for a low maintenance and usability cost, and made it more universally accessible for users.

III. Product Features

The Accessible Art program features a very simple and user friendly interface, as seen in Figure 1. It contains only the necessary tools. All tools are located in the bottom right corner of the program. As labeled in Figure 1, the features include colour options, A, brush sizes, B, save button, C, and erase button D. The white canvas to draw on is labeled E.

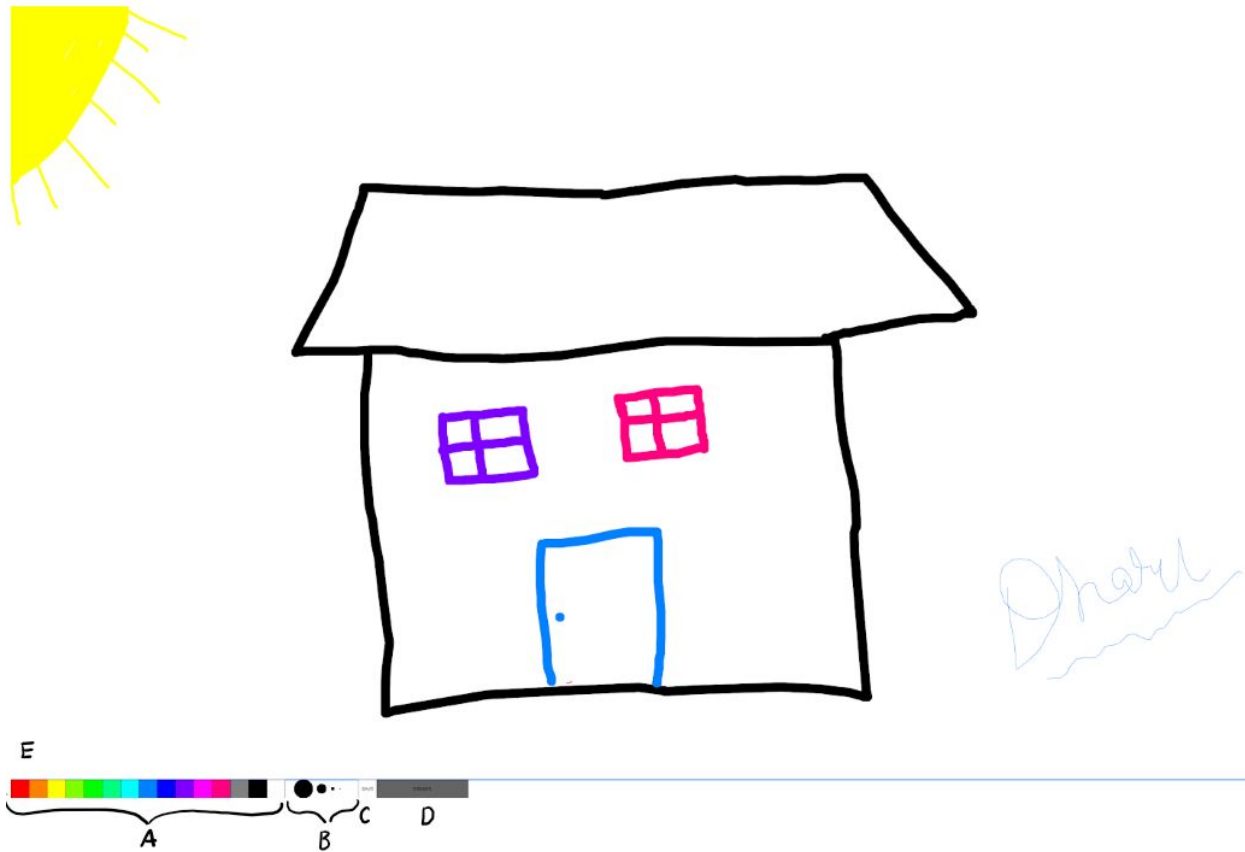


Figure 1: Labelled user interface

To draw a user must first select a brush size and colour, and while holding down the left side of the mouse, glide the cursor over the area they wish to draw. This can be accomplished with a mouse, trackpad, drawing tablet attachment or finger for a touch screen.

The product features 4 different brush sizes. The brush size options are located on the bottom of the program, to the right of the colour options, labelled B in Figure 1. These brush sizes allow artists to effectively cover a variety of spaces. The three largest brush sizes provide an effect similar to that of a marker or paint, while the smallest brush size provides an effect similar to that of a pencil. A brush size is chosen by simply selecting one of the four circles. The largest circle represents the largest brush size and the smallest circle represents the smallest brush size. To switch brush sizes, select the circle representing the size of brush that is now desired. If no brush size is initially selected, the program will automatically use the smallest brush size.

The program features 15 different colours ranging from red to purple, and black, grey and white. The colour options are found in the bottom left hand corner of the program, labeled A in Figure 1. The boxes of colour shown accurately depict how the colour will appear on the program's canvas. To select a colour, the user must select the box of colour they desire. To change colours, the user must select the colour they now desire. If no colour is initially selected, the program will automatically select white.

To erase artwork that is no longer wanted, the user must select the erase tool. The eraser is located on the bottom on the program screen, beside the save button. It is a grey square with "ERASER" on it. To erase, the user must simply hold down on the left side of the mouse and glide over the area they wish to erase. The size of the eraser can be adjusted using the tool size options as done with the brushes. If eraser size has not been selected, the program will automatically use an eraser the same size as the brush last used.

Saving files has also been made easy with the "Save" icon located in the toolbar at the bottom of the screen. When the user would like to save their created piece, they click this icon and the document is saved locally in the "drawSoftware" file folder. This stores the data as an image, which can then be accessed later when required.

IV. Product Development

4.1 Product Functionality

The function of the prototype is to allow artists, regardless of the physical challenges they face, to have the chance to produce the art they want. Our prototype allows this to happen through the various features as listed above. The simple user interface is meant to not overwhelm the sense of the user, while also providing all the tools required to produce their piece. The larger buttons located at the bottom of the screen are there for easy access and large enough so it can be visible regardless of any visual impairments. This feature is also supported due to the large screen size, which covers the entire screen. This not only allows the artist to be fully immersed into their drawing, but also can better view the larger buttons.

4.2 Program Installation

Accessible Art was created using a language known as Processing. Processing is typically used to create artwork, however here it was used to create an application. To set-up the use of this application, the user must have the Processing program installed. By performing a Google search for “Processing” and clicking the first link or visiting processing.org, the user will be brought to the Processing home page. They can now click on the “Download” link located on the left-hand side of the page or by visiting <https://processing.org/download/>. The user can download Processing for their respective program (Accessible Art was developed on Windows x64 for the client). After completing the installation process, the Processing IDE (program) has been downloaded.

Now, the user must go to the GitHub link provided in the MakerRepo (<https://github.com/dhari001/illustratorExtensions>). The user must now click on the green “Code” button and select “Download ZIP”. Ensure that this folder is downloaded in a location that is easy to access as it is how you will open and use the application. Once downloaded, the user must enter the “illustratorExtensions” folder, and then enter the “drawSoftware” folder. Here they must open the file “drawSoftware.pde”. Once clicking on this window the code file will open. To run the program, the “Play” button in the top right of the page must be clicked, and once done the software will run. The program will begin on a black colour with the smallest brush size, that can be adjusted to the liking of the artist. The application is now installed and ready to use. To run the application again, the user must access the “illustratorExtensions” folder and repeat the steps.

4.3 Product Maintenance

Testing was one of the program to ensure that it is ready to use and stable for release. This testing was done by creating drawings using the various tools and colours available. Testing was also done by allowing family members and friends to use the software to draw. Both of these tests were successful and there were no irregularities or malfunctions reported. Tests were also done to ensure that the software was easy to use and learn. This was done by allowing friends

and family to experience the program with no initial instructions. This allowed them to quickly learn and grasp the tools and mediums the program offers.

Maintenance on the application will rarely be done as it is stable for release. If a new feature is added, however, the application will need to be reinstalled. This will be done by informing users, and ensuring they follow the GitHub link to download the new version of the software.

V. Health and Safety Guidelines-Kayla

This program poses no serious health or safety risk. If a user has known sensitivity to a colour or screen exposure, this program may prove triggering after long periods of use.

VI. Troubleshooting - dhari

Overall Accessible Art is a very simple program to use, and is made with the purpose of being user-friendly. However, if the user does run into issues and is having trouble loading the program or if it freezes at any time, the suggestions listed below can be used to help solve the problem.

1. Press escape to exit the program and reopen the program
2. Restart your computer
3. Ensure that the latest version of processing is running on your system
4. Ensure that the latest version of Accessible Art has been stored on your desktop
 - a. Can be accessed from github repo
5. Ensure Java is running correctly on your system

VII. Conclusion - parmeet

In conclusion, the development of this prototype taught our group many lessons. During the process, we decided to create a prototype using Inkscape, without fully researching the licensing, and while trying to make an extension, ran into licensing issues and couldn't make our

original prototype. This taught our group that it is important to research everything in depth, including softwares that allows you to make extensions or edit code. This also helped our group manage our time better, as we ensured that we followed strict deadlines to allow us extra time to review our work and make final adjustments before handing in work. While developing our prototype, it was important to be organized because we needed to keep track of our progress. This was done using things like Github and the project plan. Tracking progress is a very useful tool for any project as it allows us to have deadlines that every group member understands and can account for extra time needed and show predecessors. Creating this prototype helped our group work in a more efficient way and ensured that we managed our time, which are tools that need to be applied in future projects.

VIII. Appendix A: Code

Code can be found at: <https://github.com/dhari001/illustratorExtensions>