

Group Members:

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Proposal:

Our group will be working on the networked paint application. The application will present a user with a canvas upon entering a server. They can draw on this canvas with different colors and different sized “pencils”. Their drawings will be shown on the canvas of other users connected to the same server. Some users will be privileged and can ban or kick other users, or completely reset the canvas. The GUI will allow the user to select different color options and different tools to draw with by clicking on buttons. A chat will also be visible to talk with other users.

- Client-Side:

The client side will be a window created by tkinter in python. It will first be a dialog box to ask the user for server information. Once a server has been connected to, a canvas will appear, and any drawing that has already been done on that server will appear on it. On the right side of the canvas is a limited selection of colors and different sized tools to draw on the canvas with. These tools will include things such as basic shapes, different size pencils, and a line tool. On the left side is a basic chat the user can type into. At the top of the screen will be a drop down menu with four options. One allows the user to disconnect, the other allows a user to connect to a new server, a third allows the user to authenticate themselves as an admin, and the last exits the application. Users will be able to chat with other users, and any drawing they do on the canvas will be sent to other users. Admin users will have more control over the server, and have a tool that allows them to reset the screen. They can also ban users.

- Server-Side:

The server side of the program will primarily accept new connections from users. It will store the current state of the canvas as it is changed by users, and propagate changes from one user to all. By default it will accept a maximum of 4 users, though the total number of users it can accept will be configurable up to 12 via a config file. This file will also have settings for default canvas size (maximum 800x600) and banned users. The server will be able to run in interactive mode as well, so that the server operator can chat with users, ban or kick users, and set certain users as admin from the server side. There will also be a database file for username and password combinations stored on the server.