

DESIGN MILESTONE

ANNIEJ
MARQUEZ
OLGASH

DATATYPE DESIGN

- Login screen
 - Textbox that allows the user to pick a username
 - A choice between localhost or IP
 - Select whiteboard from dropdown or create new whiteboard
- Righthand-side panel provides tools that allows client-controlled adjustment
 - A pallet that holds all of Color's colors
 - A slider that changes the stroke-size
 - A list that shows the usernames of collaborators
- Artsy meter at bottom of screen (whiteboard specific)
- The rest of the window is the whiteboard
- Classes:
 - User class (UserID generated by incrementing an atomic integer, client-selected username, color, stroke, canvas #)
 - Art class (the result of a stroke)
 - Server has a list of boards.
 - Every canvas has a list of its attributes

PROTOCOL

- Server -> Client
 - a list of whiteboard names (WB_NAME WB_NAME...)
 - lines of commands for previous whiteboard state, separated by newlines ("USERS" USER_NAME USER_NAME... "ARTS" DRAW_ACTIONS)
 - new draw actions to everyone connected to a particular whiteboard ("DRAW" ARTSY_METER COLOR STROKE X1 Y1 X2 Y2...)
 - new client joins ("NEWUSER" USER_NAME) to all but new client
 - change background color ("BG" COLOR)
 - a client leaves ("BYEUSER" USER_NAME)

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ANNIEJ
BEVACQUA
GENDRON

PROTOCOL [CONTINUED]

- Client- > Server
 - initial connect message (to create new Person object), request whiteboard names ("HELLO" USER_ID)
 - select whiteboard (add user to the whiteboard, set user name, return whiteboard state) ("SELECT" WB_ID USER_ID USER_NAME)
 - make new whiteboard (with color, name), like selecting, but new ("NEW" WB_NAME WB_ID USER_ID USER_NAME)
 - new draw actions ("DRAW" WB_ID USER_ID COLOR STROKE X1 Y1 X2 Y2...)
 - change whiteboard bg color ("BG" WB_ID COLOR)
 - disconnect message ("BYE" USER_ID)
- draw action format: WHITEBOARD# USER# DRAW COLOR STROKE X1 Y1 X2 Y2 ..., server/client does string.split;

CONCURRENCY STRATEGY