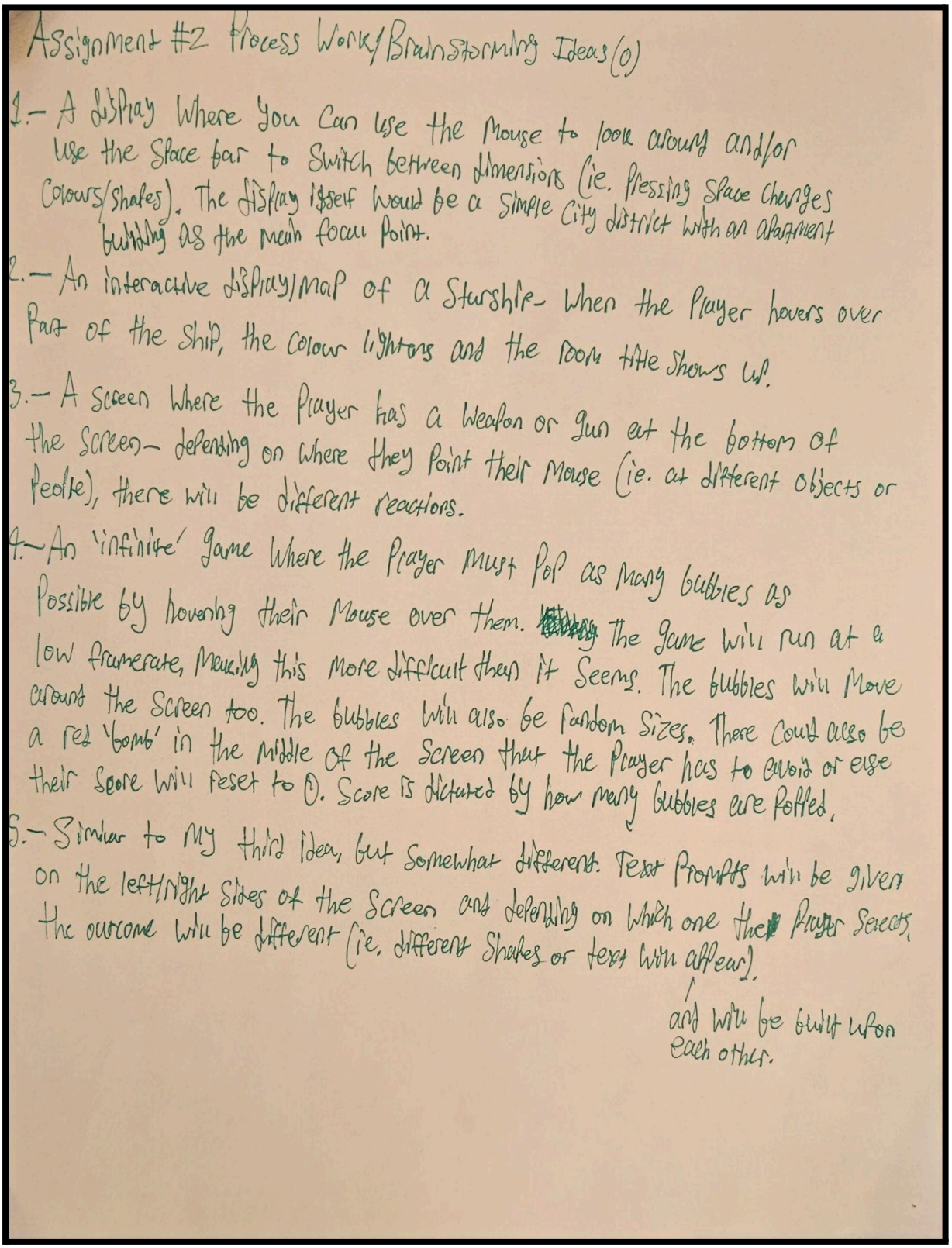
Assignment #2: 2D Interactive Drawing Project Process Work & Flowcharts

Nathan Reid-GAME 10003-02



Assignment #2 Process Work/Brainstorming Ideas (0)

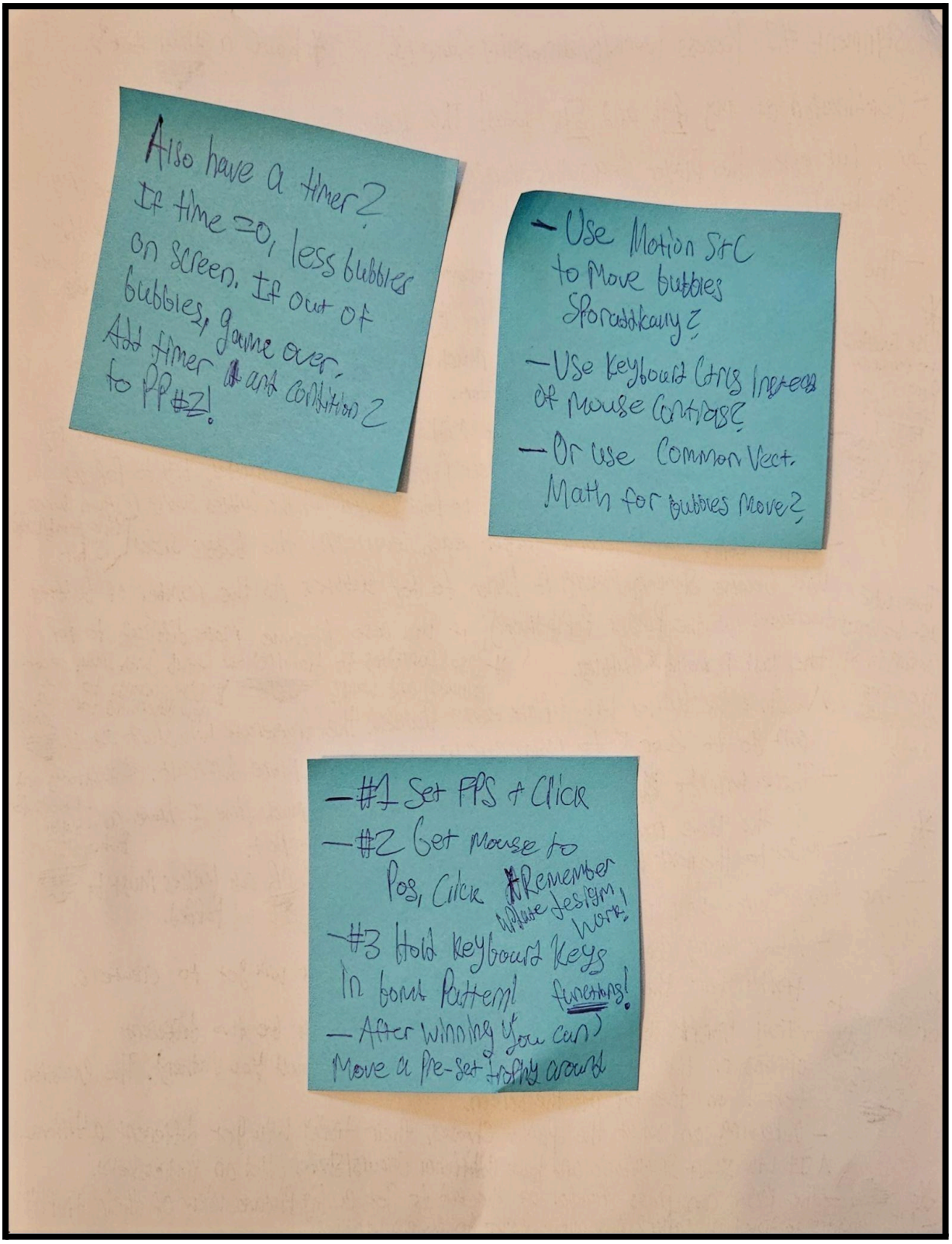
1.- A display where you can use the mouse to look around and/or use the space bar to switch between dimensions (ie. Pressing space changes colours/shades). The display itself would be a simple city district with an apartment building as the main focal point.

2.- An interactive display/map of a starship- when the player hovers over part of the ship, the colour lightens and the room title shows up.

3.- A screen where the player has a weapon or gun at the bottom of the screen- depending on where they point their mouse (ie. at different objects or people), there will be different reactions.

4.- An 'infinite' game where the player must pop as many bubbles as possible by hovering their mouse over them. ~~Either~~ the game will run at a low framerate, making this more difficult than it seems. The bubbles will move around the screen too. The bubbles will also be random sizes. There could also be a red 'bomb' in the middle of the screen that the player has to avoid or else their score will reset to 0. Score is dictated by how many bubbles are popped.

5.- Similar to my third idea, but somewhat different. Text prompts will be given on the left/right sides of the screen and depending on which one the player selects, the outcome will be different (ie. different shades or text will appear). and will be built upon each other.


Also have a timer?
If time =0, less bubbles on screen. If out of bubbles, game over.
Add timer and condition 2 to PP#2!
- Use Motion StC to move bubbles sporadically?
- Use keyboard Ctrls instead of mouse controls?
- Or use Common Vect. Math for bubbles move?
- #1 Set FPS + Click
- #2 Get mouse to Pos, Click *Remember Update Design, work!
- #3 Hold keyboard keys in bout Pattern! finesse!
- After winning you can move a Pre-set trophy around

Assignment #2 Process Work/Brainstorming Game (1) # have a timer too?

- Combination of my 4th and 5th ideas! The bubble game will be the main game, but once the player beats this portion, they can play a small minigame (my 5th idea).

- The bubble game will consist of the following elements:
  - Moving bubbles the player has to pop by hovering their mouse over them
    - The bubbles won't really move so much as their position will be randomized each frame. Bubble sizes will be random.
  - There will be a red 'bomb' in the middle of the screen. If you hover over it, you will lose your points - you collect points by popping bubbles. Try to pop as many as you can! OR I might make no point counter and the bubbles simply restart when the bomb/screen is hit.
  - The 'bomb' will become larger each level and the bubble sizes will become smaller, making it harder to pop bubbles. As the number of bubbles also becomes decreases (as the player pops them), it will also become more difficult to pop the last remaining bubbles.
    - Since the bubbles will update every frame, the framerate will start at 1 and go to 2 or 3 to make catching the bubbles more difficult.
  - There will be 2 or 3 levels depending on how much time I have and if the game running at 3 FPS is too difficult or not.
  - To get to the next level, a certain score must be reached. OR all bubbles must be popped.

- The text game will consist of the following:
  - After having completed the bubble game, the player will get to create a trophy for themselves.
  - Text prompts will appear on the screen - they will be two different options on the left and right sides (basically a would you rather). The question text is on the top of the screen.
  - Depending on what the player chooses, their trophy will get different additions
    - It will start small/basic and have additional colours/shapes added on progressively.
  - The player can press spacebar at the end to get a big picture view of their trophy!

- Use functions to make a player crosshair?
- Colour change w/ mouse click?
- Use functions to draw/redraw bomb (with small decor squares) and walls?
- Use arrays to gain new dimensions for each level?
- Arrays and loops to bubble positions/sizes!
- or spacebar to change trophy colour?
- Use functions to draw final trophy? And allow player to move it w/ mouse?

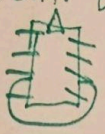
Trophy Ideas

Assignment #2 Process Work/Brainstorming Game (1)

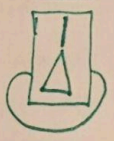
-Question #1: Are you a bold, sharp, expressive person, or an easygoing, humble, reserved person?

If Bold... Q#2.A: Do you like complexity or simplicity?

If Complex...



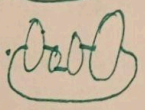
If Simple...



If Reserved... Q#2.B: Do you like balance or instability?

If Balance...

If Instable...

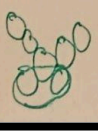


Refined/Redesigned Trophies Based on New Win Conditions

If WC1 (FPS)...

If WC2 (Point)...

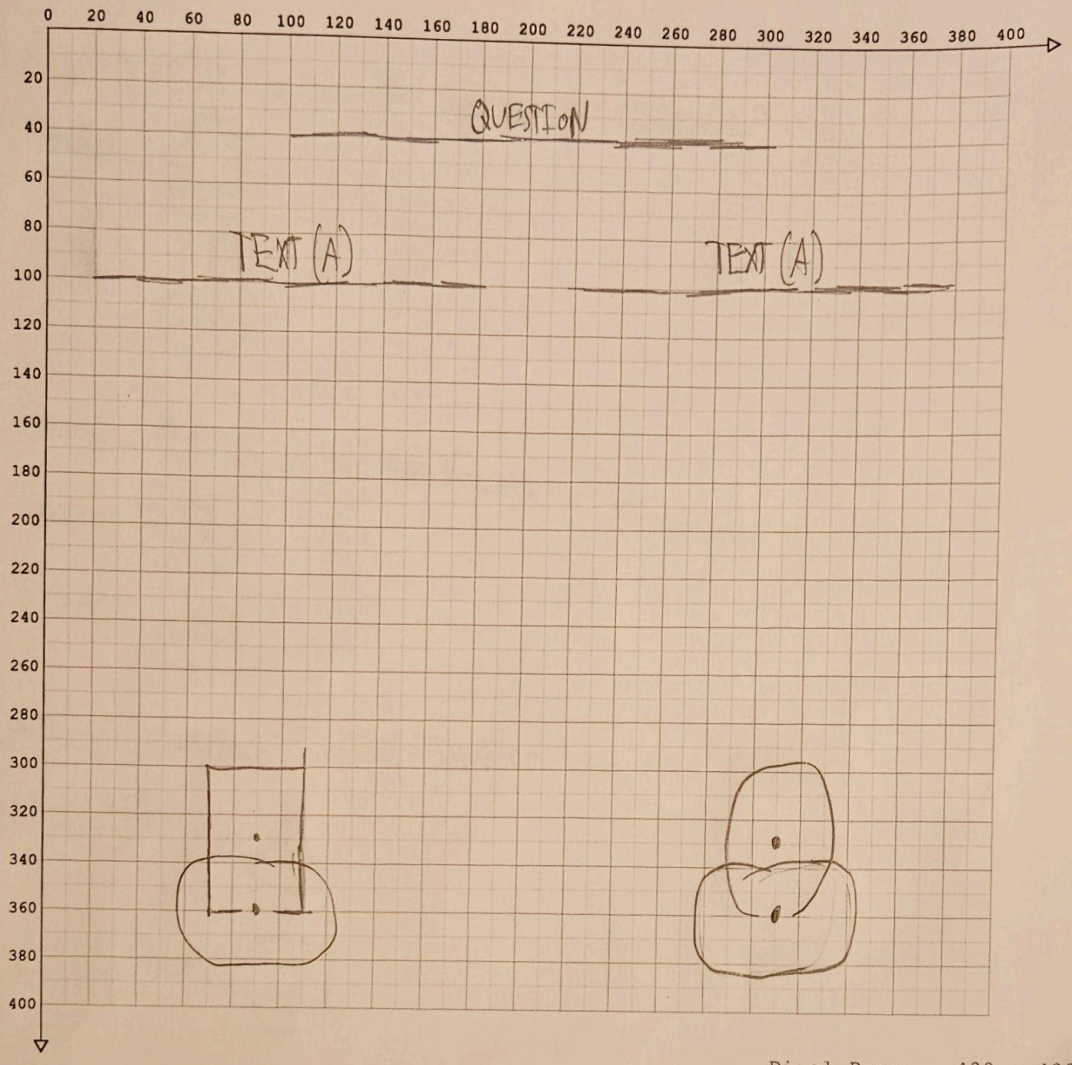
If WC3 (Pattern)...



Assignment #2 Process Work/Pixel Paper Planning # Trophies # (2)

1 Potential Trophies (2 sets of questions)

Question Text: (100,40), (300,40)



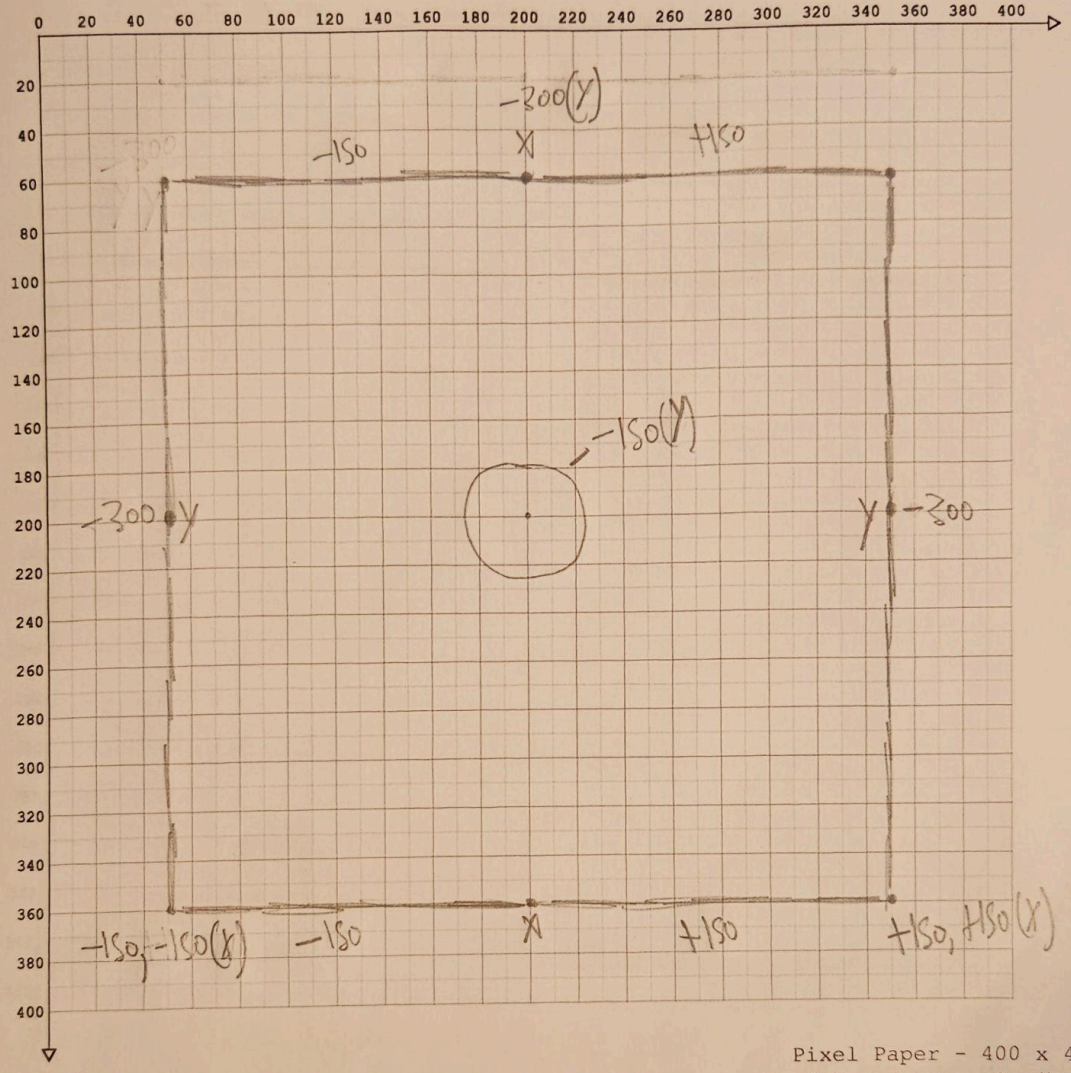
Pixel Paper - 400 x 400
Graph Paper for Screen Coordinates

Pedestal 1: (90, 360). Trophy Base Rec: (90, 330), (40, 60).
x y x y w h

Pedestal 2: (310, 360) Trophy Base Oval: (310, 330).
x y x y

Assignment #2 Process Work/Refined Pixel Paper (for Mouse box/Pointer) (2)

- Shapes will be drawn at X/Y Positions. Then, Pixels are added to 'Push' Shapes in certain directions above base X/Y coords.



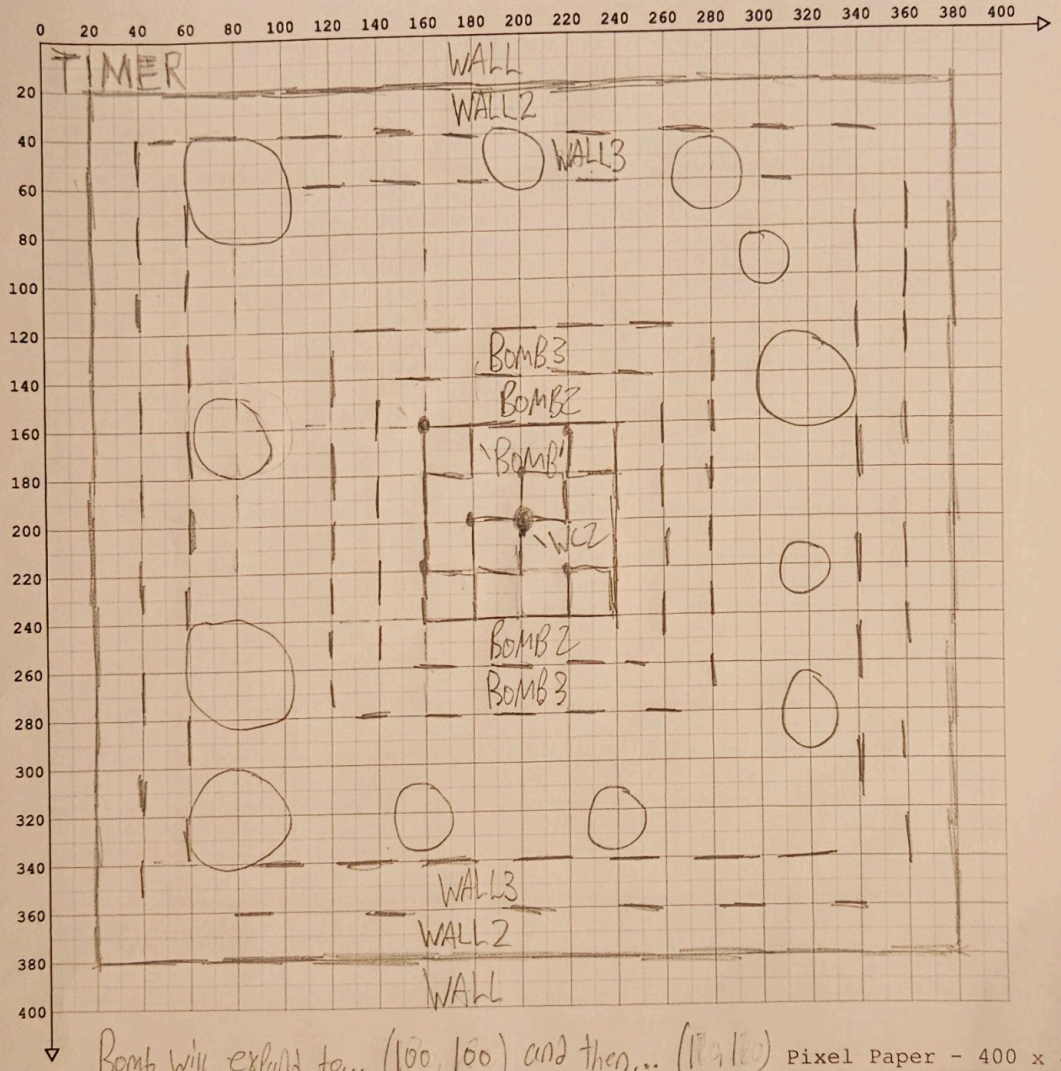
Pixel Paper - 400 x 400
Graph Paper for Screen Coordinates

Assignment #2 Process Work/Pixel Paper Planning (2)

Wall: (20, 20), (380, 20)
Wall2: (20, 20), (20, 380)
Wall3: (20, 380), (380, 380)
Wall4 (380, 380), (380, 20)

Bomb: (160, 160), (80, 80)
x y w h (anywhere in-between Wall and Bomb)

Circles/Bubbles: (Random Positions), (Random radius - Values put into randomizer will get smaller!)



Bomb will expand to... (100, 100) and then... (120, 120)
w h w h

Pixel Paper - 400 x 400
Graph Paper for Screen Coordinates

Wall will move inwards by 20 pixel increments.

- Small decor squares will be placed in Bomb. 20x20 Pixels.

Win Condition 2: (200, 200)

- Timer will be in one of the screen corners. (0, 0)

Assignment #2 Process Work/Refined Game Idea (3)

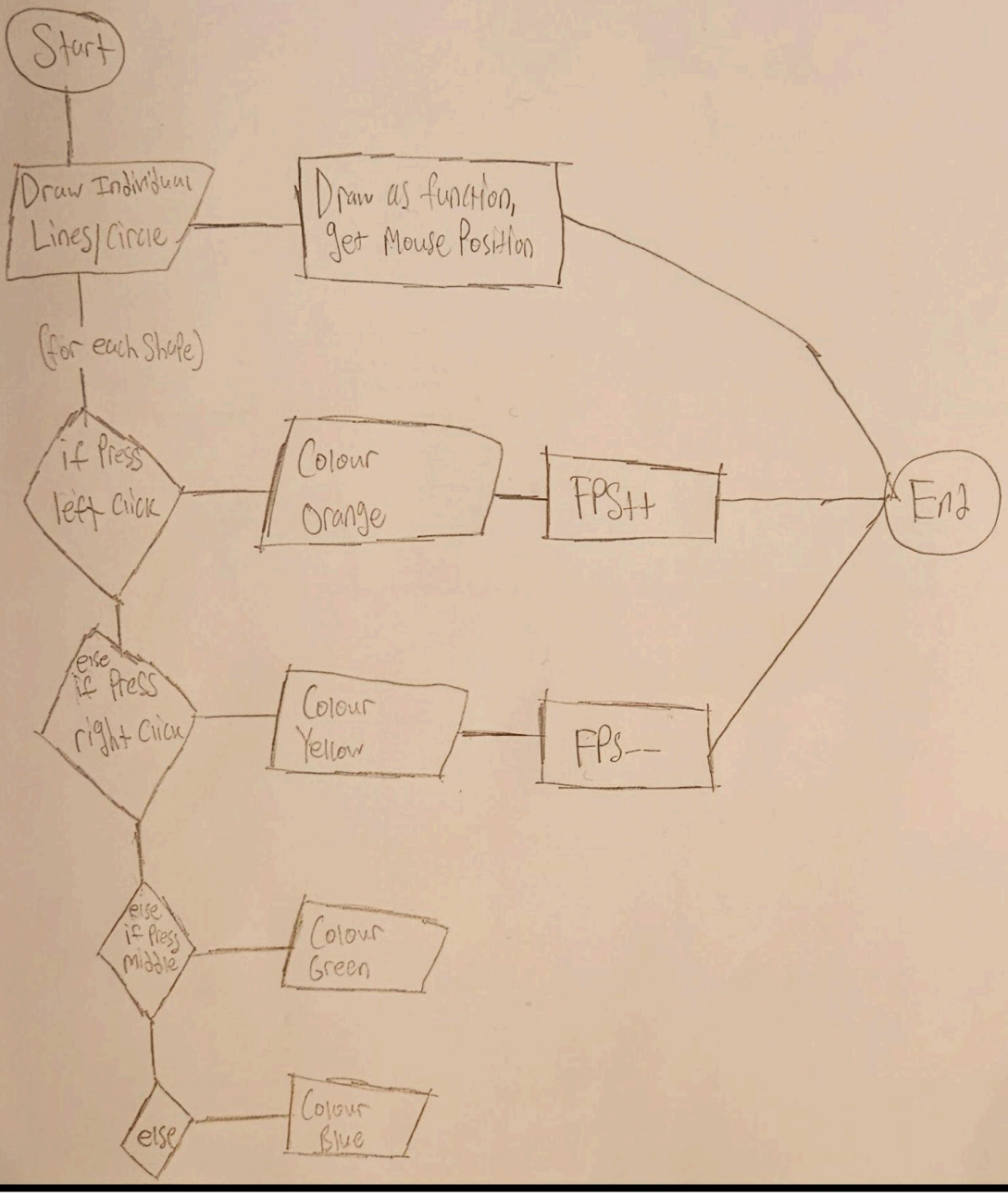
- Although I had the original idea of the game simply being to pop as many bubbles as possible while avoiding certain areas, as the bubbles moved across the screen, I had trouble implementing some of these concepts into my code.

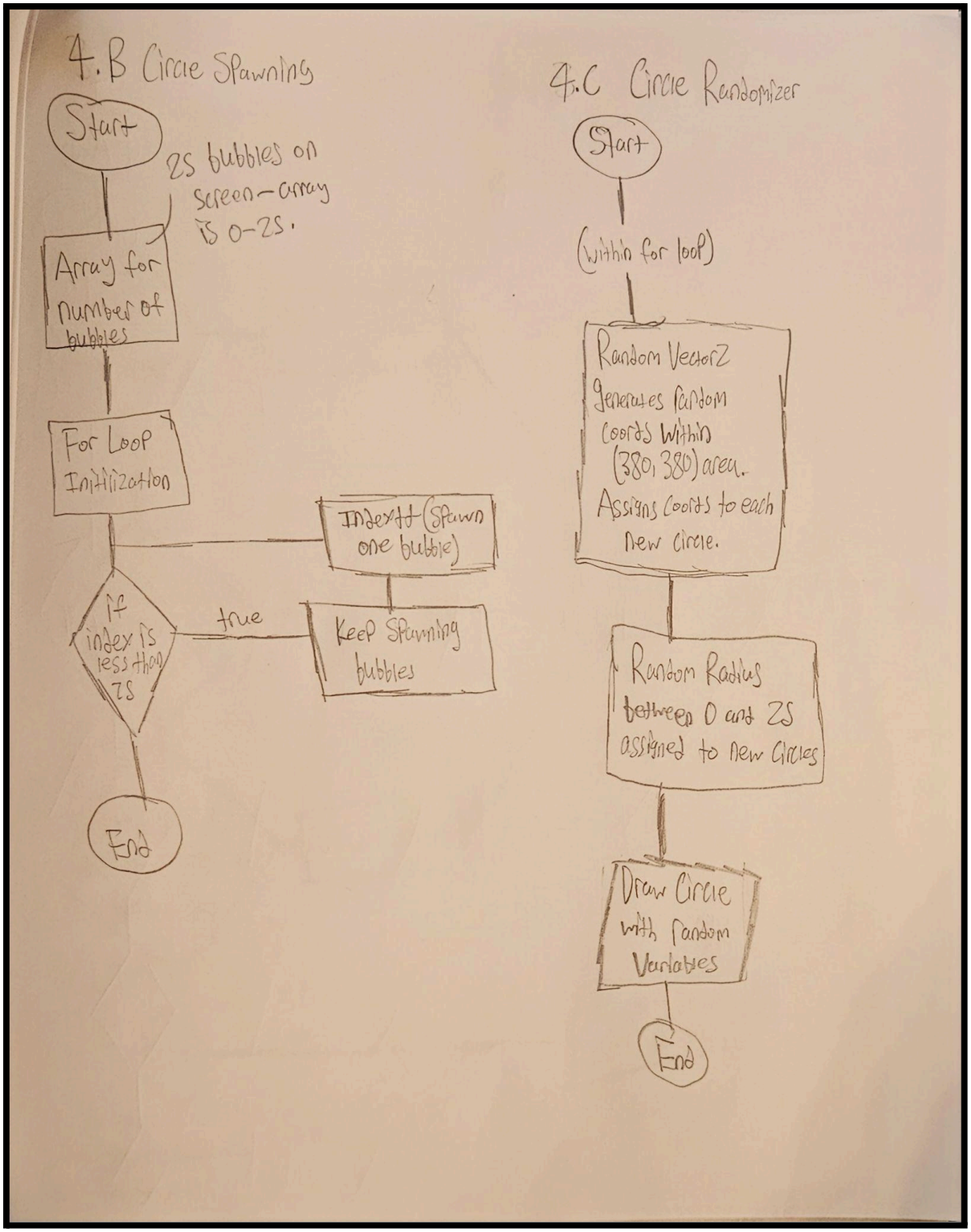
- The game now consists of three win conditions - reach one, and all the bubbles pop at once.
  1. Get FPS inbetween specific range using mouse buttons to control it.
  2. Put mouse cursor over pinpoint spot on play area.
  3. Hold down all keys on the keyboard in a certain pattern.

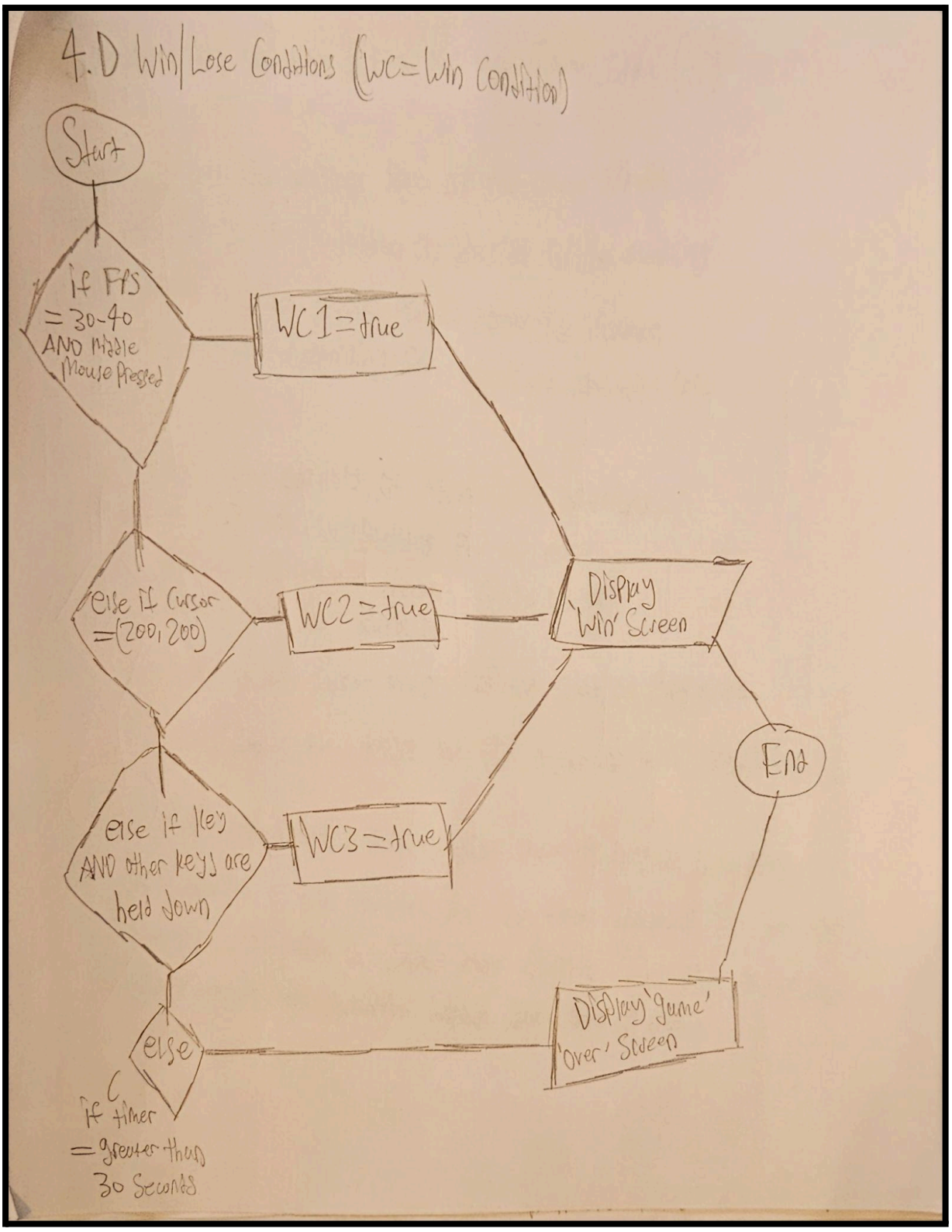
- The game also includes a timer that runs as long as the player has not reached a win condition. If the timer reaches 30 seconds, the player is met with a game over screen. Thus, the player has to complete a win condition within the allotted time.

Assignment #2 Process Work/Flowchart (4)

4.A Drawing Pointer Function




4.B Circle Spawning
Start
25 bubbles on screen—array is 0-25.
Array for number of bubbles
For Loop Initilization
Index++ (Spawn one bubble)
If index is less than 25
true
Keep Spawning bubbles
End
4.C Circle Randomizer
Start
(within for loop)
RandomVector2 generates random coords within (380, 380) area. Assigns coords to each new circle.
Random Radius between 0 and 25 assigned to new circles
Draw Circle with random Variables
End


4.D Win/Lose Conditions (WC=Win Condition)
Start
If FPS = 30-40 AND Middle Mouse Pressed
WC1=true
Else if Cursor =(200, 200)
WC2=true
Else if key AND other keys are held down
WC3=true
Else
Display 'Win' Screen
End
Display 'game' 'over' Screen
C
If timer = greater than 30 Seconds