FINAL PROJECT
Capture UR Motion
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Concept

- Tradition and innovation in the animation realm
- Integrating low-tech animation techniques (hand drawings, optical mechanical devices) with Hi-tech animation techniques (Processing, Arduino, LED Matrix, Touchscreen)
- Integrating physical animation with virtual animation
- Creating more interactive animations
Traditional References

- Early animation inventions that produce an illusion of a action from a sequence of static pictures
- Based on the Persistence of vision phenomenon
Initial Experimentations

- Animating physical LEDs
- LEDs light up according to the user’s stroke input
Initial Experimentations

- Creating an illusion of blinking lights by animating physical LEDs inside a motorized Zoetrope
- Recreating a low-tech illusion toy in a 3D computer animation
- Recreating the physical illusion into a virtual environment
Potential Directions

- Creating a physical device that will allow altering the animation on the screen
- Drawing device / 3D device

Diagram:

```
  User Input
    /\       /\
   /  \     /  \
  3D kinetic armature       Drawing Pad
     |     /\       /\          |
     |    /  \     /  \
     |   User Input
```
Sketch of Option I

- Processing sketch
- LED dot matrix
- Spinning plate
- DC motor
- Input device
Flow Chart

Input - User drawing

- Turn ON the LEDs that follow the user’s stroke
- Spinning matrix creates a symmetrical shape

LED Dot Matrix

- The reversed version: All LEDs light up except for the LEDs that follow the user’s stroke

Capture of drawing data
- Saving data in an array
- Draw shape
- Copy and mirror shape
- Save shape as an object
- Animate the object

Processing Sketch
Processing Sketch:

- Particles Animation
- The user’s stroke is automatically mirrored to create a closed shape
- The shape is animated as a dynamic particle in space
- Colliding with other particles
- Inspiration from Kandinsky’s abstract compositions
Sketch of Option II

The lows and highs of Mr. Tech

- Creating a physical device that will allow altering the animation on the screen
- Inspired from 3D animation modeling techniques – based on an animated armature
- The physical input could be a simple physical armature that could be manipulated.
- The output will be modification in the animated character in the screen