Class 6 : 17 Sep

Design & components of Interactive systems

AKW 123

- dev station
- closet storage space

CEID

- parts

2nd module : input

Roles

- Developer designs system for artist/creator or observer
  - not all software is created to solve a problem
    - e.g. games
  -
- Arist/creator
  - they push the limits of your system to achieve expression and novel possibilities

    e.g. John Cage prepared piano
    extended technique
    playing piano from the "inside"
- observers can also push boundaries as naive explorers of your system.
  - people can violate ~~explanat~~ expectations.

Example: kinect detect motion → swirls of ~~col~~ color on screen

example: digital music instrument
- Roli Seaboard

- interfaces can be complex → designed for experts
  - e.g. Minu glove prototype.
    Imogen heap

wrist orientation → accelerometer
haptic feedback
buttons } LEDs

instruments to create many pieces vs. an instrument that is its own piece.

Inputs
- switches
- buttons
- joysticks

Hardware input → Arduino / micro controller ESP32 → Raspberry Pi

Get double pole switches if you can.

See the diagrams

"DPST"
double pole single throw

"SPDT"
single pole double throw

ESP32 ADC for Raspberry Pi

Debouncing

- switches physically 'bounce'

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- Use 3.3v LEDs not 5V
- Don't put 5V into GPIO pin

Task 1

momentary button + SPDT switch + joystick } use all three

Task 2

multiplayer device Data DUO

1 interaction modes
2 Physical forms
3 number of user → out to speaker/ screen/ Bectow/

3 ways to break system