CSE 340
Winter Quarter 2020
1/29/2020

Lecturer: Dr. Jennifer Mankoff
Note-taker email: jial8@uw.edu

Link to Notes on Google Docs:
https://docs.google.com/document/d/1G4fCMoP4SswL1WqnRmAfWwqJQNt6fS4uxve7v2fCAa8/edit?usp=sharing

Week 4 Lecture 2

Model View Controller, Input Devices

How does an app respond to input?

- Input Event (high-level overview of toolkit process)
  - Have physical way to sense touch/input ex: capacitive touch
  - Get location of input (x,y)
  - **Pick interactor to give input** (wide range of possible responses)
    - Could depend on current state of interactor
    - Execute its **"state machine"**
  - **Notify toolkit**
  - Update models
- View(Interactor) → output

Responding to Users: Model View Controller

- **Abstraction** of the whole process: View -- *input* → Controller (knows current state, *Updates Model*) → Model 0 to 3 ***State Change*** → Controller → *Output* to View (trigger *redraw* and show)
- Ex: Model State = Account access list (Jen, Adam), Current Person (Adam), Lock State = closed
- Trigger event handling = password entry

    - Doesn't just have to be software! Can be fancy speech recognition-based digital door lock.
- **MVC in Android** (skipped over this concept for now)

Event Handling

- **Input is harder than output** (more diverse, less uniformity)
    - More affected by human properties
    - Mouse: move mode (has a set location on screen at all times), ***relative positioning*** (need to move it on a surface like table)
        - Hovering can cause events based on location
    - Touch screen: jumps press to press but can't move it
        - Can have multiple touch functionality
        - ***Absolute positioning***
    - Joystick: mapping changes in force → location or speed/direction
    - What about... wii controller? 3D location sensing? :)

Higher Level Abstraction

- Valuator → returns scalar value
- Button → integer value, ... and many more!
- Event based devices: time of input determined by user
- What do we need for the contents of an **event record**?
    - **Event type (ex: key down), target, timestamp, event-specific variables, context**