SE 101 Proposal

Project: The aim is to create a keyboard on a capacitive touch screen or touchscreen substitute which reads the input and can output it onto a screen. The difference from a standard keyboard is that it will function as a larger swipe keyboard.

Major Software Component:

- ➔ Multitouch library to interface with the display to get the touch coordinates off the display
- ➔ Determine coordinate bounds and key bounds on the keyboard
- ➔ Touch screen drivers for receiving coordinates

Prototype Plan:

This project will be an evolutionary prototype. It will be built by layering together different components one step at a time until the final project is complete. The roles will be split depending on expertise and by component. The ideal first step is to receive input and convert it into coordinates using a multitouch library. From then, using the dimension of the screen, the approximate location of various keys on the keyboard will be mapped out.

Hardware Component:

- ➔ Large arduino OLED display or LCD Capacitive touchscreen
- ➔ Arduino and related circuitry
- ➔ Vibration motors for haptic feedback

Challenges:

- ➔ General lack of expertise in the area of hardware: the solution to this will be using youtube tutorials, receiving assistance from TAs and speaking to friends who are knowledgeable in the field of hardware
- ➔ Finding pre-existing software libraries i.e Multi Touch libraries for reading input