CS 193A

Mouse Gestures and Swiping
Swiping

- **swipe**: Sliding the finger in a given direction.
  - Commonly used in mobile apps to accept/reject, delete, dismiss
  - Most common use case:
    swipe left (no, negative, delete), or
    swipe right (yes, positive, approve)
Swipe support in Android

- Android doesn't really have great support for swiping.
- You can detect mouse touch events and motion, but the threshold of what constitutes a "swipe", and how to respond to it, is up to you.

```java
public class MyActivity extends Activity implements OnTouchListener {

    @Override
    public boolean onTouch(View view, MotionEvent event) {
        ...
    }
}
```
A gesture listener

- You can write a "gesture listener" to listen to mouse swipes:
  - The listener won't do anything until you attach it *(next slide)*.

```java
class GestureHelper extends SimpleOnGestureListener {
    @Override
    public boolean onFling(MotionEvent e1, MotionEvent e2,
                            float velocityX, float velocityY) {
        // did the mouse move far enough, fast enough?
        ...
    }
}
```
Listening for swipe gestures

- You have to use a "gesture detector" with your listener:

```java
public class Name extends Activity implements OnTouchListener {
    private GestureDetector gesture;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        gesture = new GestureDetector(this,
            new GestureHelper());
    }

    @Override
    public boolean onTouchEvent(View v, MotionEvent e) {
        return gesture.onTouchEvent(v, e);
    }
}
```
Simplified swipe library

- The instructor provides an OnSwipeListener library to make things simpler *(see class web site)*:

```java
// write whichever of the onSwipe___ methods you want
view.setOnTouchListener(new OnSwipeListener(this) {
    public void onSwipeLeft(float distance) {
        ... }
    public void onSwipeRight(float distance) {
        ... }
    public void onSwipeUp(float distance) {
        ... }
    public void onSwipeDown(float distance) {
        ... }
});
```
SwipeListView library

- SwipeListView library implements a swipe-able list:
  - https://github.com/47deg/android-swipelistview