CIS493   Mobile Application Development Using Android
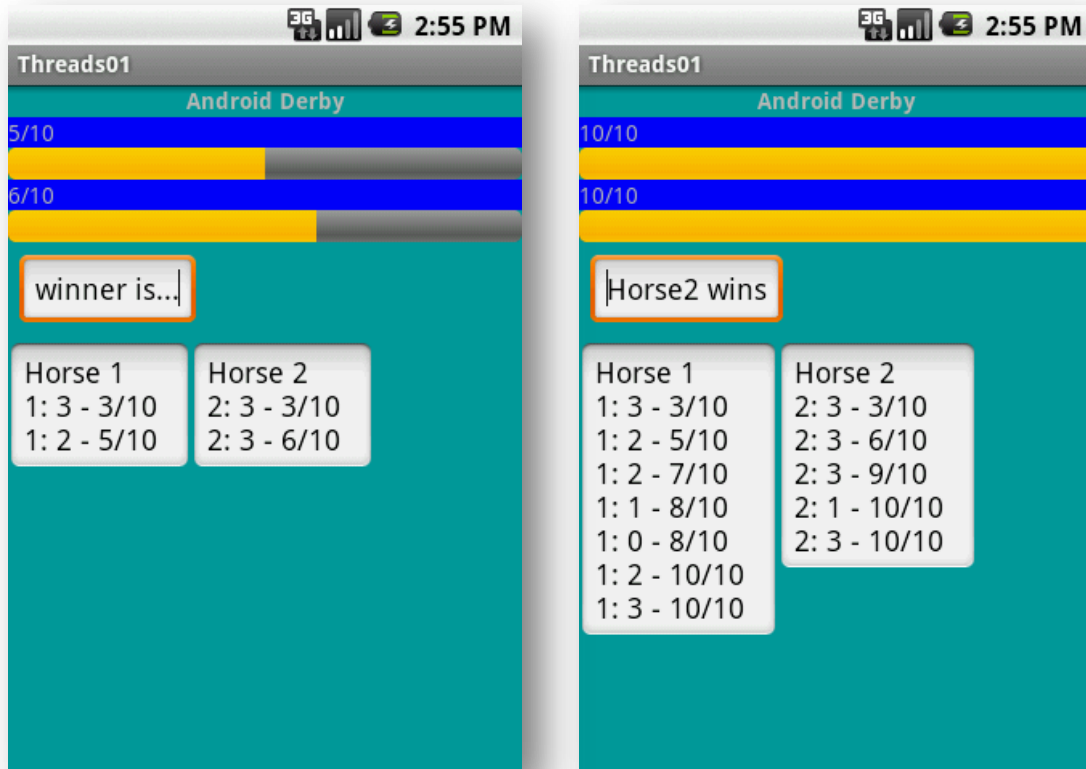

Android Derby

In this application we will use multi-threading to simulate a horse race. The figures below suggest a possible scenario for a 10-miles race won by *Horse2*.

Each horse is implemented by an independent thread whose behavior consists in generating a small random number (0 - 3) representing the advance (in miles) made by the horse at that moment. After advancement is made the thread sleeps for a second, if necessary it generates the next pace of progress until the total length is reached. Each decision about progress toward the finish line is communicated as a *Message* using an Android *Handler* object.

The main thread is responsible for managing the UI. Main receives the messages sent by the threads and depicts in progress bars the relative position of each horse. The main thread must maintains a 'log' of messages. Each displayed log-line consists of <*horse id, current_miles_forward, total_miles_so_far/total_miles*>. Observe a horse may decide at any point to move zero miles (lazy horse). The main thread must declare who is the first horse crossing the finish line.