

In this assignment you will produce an Android range-finder application to help avid golfers determine the distance between their current location and the (center, front, back) of the greens; as well as any other relevant land-markers on the course (hazards, bunkers, car pads , etc.) Mapping of the golf course is provided in the form of a KML file (see sample below).

As a proof of concept we will work only with the first hole of Manakiki Golf Course (Willoughby, Ohio). Consider you have been hired to *complete* the work initiated by a colleague who is no longer at the company. An early version of the code is available at:

<http://grail.csuohio.edu/~matos/notes/cis-493/2010-fall/Homework/99-Golf-Gps.zip>

KML data for Manakiki GC is available at:

<http://grail.csuohio.edu/~matos/notes/cis-493/2010-fall/Homework/99-map-info-kml-GOLF.zip>

### What to do?

1. Get your current GPS coordinates using hardware reading or a software fix (lecture notes 24 - see Skyhook Wireless Technology)
2. Compute distance from your current location to relevant hole's markers held in the kml resource/sdcard file.
3. Provide a reasonable interface<sup>(2)</sup> showing prominently the distance to center, front, back of the green (ideally to each marker ahead of you).
4. Switch automatically from one hole to the next.
5. Beautify your app adding score card, statistics, timing, advice, ....

### Resources:

1. KML Data taken from BBGPSGolf webpage Dec-8-2010  
<http://www.bbgpsgolf.com/viewcourselistg.php>
2. SKY-CADDIE Model SG-4. Information available at  
<http://www.skygolf.com/products/productDetail.aspx?sku=SG4>
3. Google Earth (use it to visualize the contents of the kml file)



A fragment of KML code showing the mapping for Hole 1 at Manakiki GC.

```
<?xml version='1.0' encoding='UTF-8'?>
<kml xmlns='http://www.opengis.net/kml/2.2'>
<Document>
  <gcname>Manakiki Golf Course</gcname>
  <Placemark>
    <name>Tee - Hole 1</name>
    <Point>
      <coordinates>-81.4324182271957,41.5984273639879,0</coordinates>
    </Point>
  </Placemark>
  <Placemark>
    <name>Front of Green - Hole 1</name>
    <Point>
      <coordinates>-81.433182656765,41.5955730479591,0</coordinates>
    </Point>
  </Placemark>
  <Placemark>
    <name>Middle of Green - Hole 1</name>
    <Point>
      <coordinates>-81.4331665635109,41.5954647298964,0</coordinates>
    </Point>
  </Placemark>
  <Placemark>
    <name>Back of Green - Hole 1</name>
    <Point>
      <coordinates>-81.4331531524658,41.5953664411267,0</coordinates>
    </Point>
  </Placemark>
  <Placemark>
    <name>Bunker - Hole 1</name>
    <Point>
      <coordinates>-81.4327722787857,41.5969992188305,0</coordinates>
    </Point>
  </Placemark>
</Document>
</Kml>
```