Student Name: _____

CS455/655-Mobile Sensor Networks: Homework 2. (100 points)

Deadline: Feb 22: Each student has to submit both **hard copy** and **electronic copy** of the homework report.

1. **Hard copy submission in the class:** Return the hardcopy of your homework report and include your source code in your report.

2. **Electronic copy submission:** Name your file as: "HW2-Fisrt_Lastname" then email your homework report to Bravehung@yahoo.com: Before 11.30pm Feb. 22th.

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Use Matlab, Cpp, Python, etc. to:

1. **(80 points)** Write a programing function to compute a sigma norm defined in Equation (8) in Slide 14, Lecture 4.

   Then enter following inputs to your written function to compute sigma norm of the following q_i and q_j (you can set $\epsilon = 0.1$):

   - $q_i = [3, 5]$ and $q_j = [7, 5]$;
   - $q_i = [2, 8]$ and $q_j = [4, 5]$.

   (Put your code here so the instructor can check it easily.)

3. **(20 points)** Compare values of sigma norm and Euclidean norm (you can put the results in a table to easily compare them). If you forget about the Euclidean norm, read Slide 7 in Lecture 4.
   You can further test your sigma norm and compare it with Eulidean norm using different inputs of q_i and q_j than the ones defined in Question 1.