Chapter 2 Exercise 19

Exercise 19: For the following vectors, x and y, calculate the indicated similarity or distance measures.

(a) x = (1 ,1,1,1), y = (2 ,2,2,2) cosine, correlation, Euclidean

(b) x = (0 ,1,0,1), y = (1 ,0,1,0) cosine, correlation, Euclidean, Jaccard

(c) x = (0 ,−1,0,1), y = (1 ,0,−1,0) cosine, correlation, Euclidean

(d) x = (1 ,1,0,1,0,1), y = (1 ,1,1,0,0,1) cosine, correlation, Jaccard

(e) x = (2 ,−1,0,2,0,−3), y =(−1,1,−1,0,0,−1) cosine, correlation

Download a .zip file from http://webpages.uncc.edu/aatzache/ITCS6190/Exercises/Exercise19\_Chapter02\_SimilarityUsingVectors\_JAVA.zip

Unzip the downloaded file

**Steps to execute a JAVA program for Similarity Measures:**

1. Open Eclipse
2. Create a new Java project
3. Copy the Driver.java and similaritymeasure.java to the src folder of the Java project.
4. Run Driver.java
5. Select the appropriate input to execute the similarity measures for the given exercise 19 data.
6. Take a screenshot of the runtime environment
7. Submit the screenshot and the output file generated SimilarityAndDistancesOutput.txt to Canvas.

Please Note: When executing the program, after entering option 1/option 2, the program completes execution. i.e. if the square [at the top right of console screen] is grey (disabled) means the program is complete. Refresh the project and see if output file is generated.

Similarly for option 2 – The animalData.txt should be present in the project folder.