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## CMPSC497 Fall 2018 Homework 2.

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**Assigned:** Friday, August 31, 2018

**Due:** Friday, September 7, 2018 (by midnight, submit online via Canvas)

**Maximum:** 100 point

**Note:** This assignment is to be done by an individual student, no team work allowed.

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1. (40%) Discuss whether or not each of the following activities is a data mining task.
  - a) Extracting the frequencies of a microwave wave.
  - b) Divide the customers of a company according to their profitability.
  - c) Monitoring seismic waves for earthquake activities.
  - d) Predict the future stock price of a company according to their historical records.
  - e) Compute the total sales of a company in the last year.
2. (30%) Data mining tasks are generally divided into two major categories, i.e., predictive and descriptive tasks. Are the following tasks predictive or descriptive? Please explain.
  - a) Regression.
  - b) Association Analysis.
  - c) Clustering.
3. (30%) Please define and give one example of its applications for the following data mining tasks.
  - a) Classification.
  - b) Regression.
  - c) Clustering.