Due Dates:

- HW1, September 6
- HW2, September 13

Turn in instructions:

- be email to the T.A. parnell@cs.utexas.edu, by midnight Texas time.
- make the subject line read, “EE382V HWx” where x is the homework number.

Reading: Chapter, 7, 8.1 – 8.3, 9.1, 9.2, 13, 14.1, 14.2

HW1:
Part A:
Text problems: 7.2.3 a, 7.2.5, 7.5.2a, b, c

Also, using an enterprise class RDBMS (e.g. DB2, Oracle, SQLServer), check your answers by creating a database table and correctly inserting a correct record and detecting an error when trying to insert an incorrect record.

Think about problems: (These problems are not to be handed in. But I highlight them as problems I think you should be able to solve and whose solution entails some useful ideas.)

Think about: 7.1.5b, 7.2.2b, 7.2.3b, 7.3.1a, 7.5.2c

Part B:

A part of a real data consistency problem on which I was consulted.

Consider the relation schema

Person(name, state, zipcode)

The United States Post Office has defined official two letter abbreviations for each state, and related geographic entities. (e.g. TX = “texas”, DC = “Washington D.C.”)

The United States Post Office has defined 5 digit zip codes that determine much smaller geographic units, strictly of their own invention. (A single building can be given a zip code, e.g. the Empire State Building 10118). For each two letter state abbreviation, there is a contiguous interval of zip codes. For Texas zip codes for in the interval [73301 - 88595]. No zip code in that interval corresponds to a different two letter abbreviation.

a) Write the Create Table statement that requires a person record to have a state and zip code.

b) Sketch a Create Table statement for person that checks that the state and zip code are in the record and are consistent per the rules above. (use only constraints. Do not add additional tables.

c) Develop a solution where you add a table and code the constraint as an on insert trigger for the person table.

d) Develop a solution where you may add a table, and your solution may contain only referential constraints.
HW2:

Text Problems: 14.1.2, 14.1.7a-c, 14.2.1a-c, 14.2.2a (just part a wrt 14.2.1),, 14.2.3. 14.2.5e-h. 14.2.8a

Think about:
14.2.5 a,b,c,i, 14.2.6