CSCI3170 Short Assignment/Classwork #4  
(Issued in the lecture on Mar 28)

Name: Pass / Fail

Student ID:

1. Consider the following relation and functional dependencies:

R(a,b,c,d)

F = {a🡪b, c🡪d}

1. Give a BCNF decomposition of R. Please show your steps.
2. Prove that your decomposition is a lossless-join decomposition.

1. Consider the following relation and functional dependencies:

R(a,b,c,d,e)

F = {ab🡪cd, c🡪d}

1. List the candidate key of R
2. Find the canonical cover of F
3. Give a 3NF decomposition of R. Briefly explain your answer.