**Problem Set 1: First Normal Form**

1. Give a set of FDs for the relation schema *R(A,B,C,D)*with primary key *AB*under which *R*is in 1NF but not in 2NF.
2. Convert the following Relation into a database tables by applying 1st normalization. R = {Student ID, Last Name, First Name, Course ID, Course Section, Course Name, Grade, Professor Last Name, Professor First Name, Bldg,  Office #}
3. Convert the bellow image into a database tables by applying 1st normalization.
4. Grade\_report (StudNo, StudName, (Major, Adviser,  (CourseNo, Ctitle, InstrucName, InstructLocn,Grade)))

Advisor -> Major,  
 StudNo,CourseNo,Major -> Grade,   
 StudNo,Major -> Advisor  
 Convert the above relation into 1NF

**Problem Set 2:Second Normal Form**

1. Give a set of FDs for the relation schema *R(A,B,C,D)*with primary key *AB*under which *R*is in 2NF but not in 3NF.
2. Apply 2nd Normalization for the above 2nd problem?
3. Apply 2nd Normalization for the above 3rd problem?
4. Apply 2nd Normalization for the above 4th problem?