1. List the members of your group below. Underline your name.

2. Prove or disprove: Every binary relation is in BCNF.

3. Provide a simple example of a *lossy* decomposition of a relation, explaining the claim.

4. Is it possible to augment the original schema of the example of Question 3 with a functional dependency that renders the decomposition lossless? (You may modify the instance as needed.)

5. Is it possible to augment the original schema of the example of Question 3 with a functional dependency that leaves the decomposition lossy? (You may modify the instance as needed.)

6. Demonstrate the use of the *chase* algorithm to verify the claims in Questions 4 and 5.