

Today's class: relational schema design, BCNF decomposition; §§ 3.{4,5}.

Next class: 4NF, 3NF, etc. §§ 3.\*

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

2. Consider  $R(A, B, C, D, E)$  with dependencies

$$AB \rightarrow C$$

$$BC \rightarrow A$$

$$D \rightarrow E$$

$$CE \rightarrow B$$

List all keys of  $R$ . Justify your answer briefly.

3. Project the dependencies of Question 2 onto the relation  $R'(A, B, C)$ . Depict some intermediate steps.

4. Decompose  $R$  as necessary to generate a BCNF schema. For each decomposition used, clearly indicate the dependency used and the relations before and after the decomposition. List the projected dependencies for each decomposed relation.