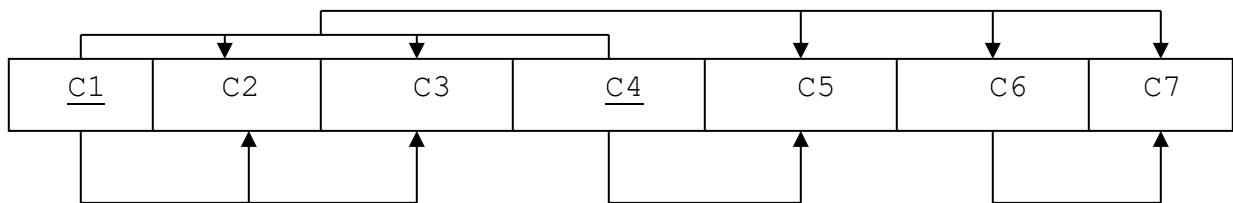# CIS 310 - DATABASE DESIGN
ASSIGNMENT #6

Worth 40 points

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<u>Provide the answers in this document below</u>. Sketch the dependency diagrams on scratch paper by hand first and then use Word or Visio drawing tools to present them in a professional manner like in the diagram below. Save the file as A6_Your_First_Name_Your_Last_Name.pdf on the J drive. For example, A6_John_Brown.pdf. **Submit the <u>pdf</u> file to Blackboard by the due date**.

Given the dependency diagram answer the following questions.

<u>C1</u>	C2	C3	<u>C4</u>	C5	C6	C7

1. Identify the indicated dependencies (as desired, partial, or transitive) on the diagram above and briefly discuss/explain each of them below using the functional dependency: the determinant and the dependent. For example, <u>C4</u> → C5. Where C4 (underlined) is part of the PK.

    Desired dependency:

    C1 C4 -> C2 C3 C5 C6 C7 where C1 and C4 are the primary keys and relate to each dependent.

    Partial dependency:

    C4 -> C5 as C4 only depends on C5 instead of the entire primary key.

    Transitive dependency:

    C6 -> C7 because C6 depends on an attribute that is not part of the primary key.

2. Create a database whose tables are at least in 2NF, showing the dependency diagrams for each table.

3. Create a database whose tables are at least in 3NF, showing the dependency diagrams for each table. Indicate the PK and FK(s) for each table. Which tables the FKs point to?