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Rochester Institute of Technology Golisano College of Computing and Information Sciences Department of Information Technology

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Homework #7: Transposing - Supertypes, Subtypes

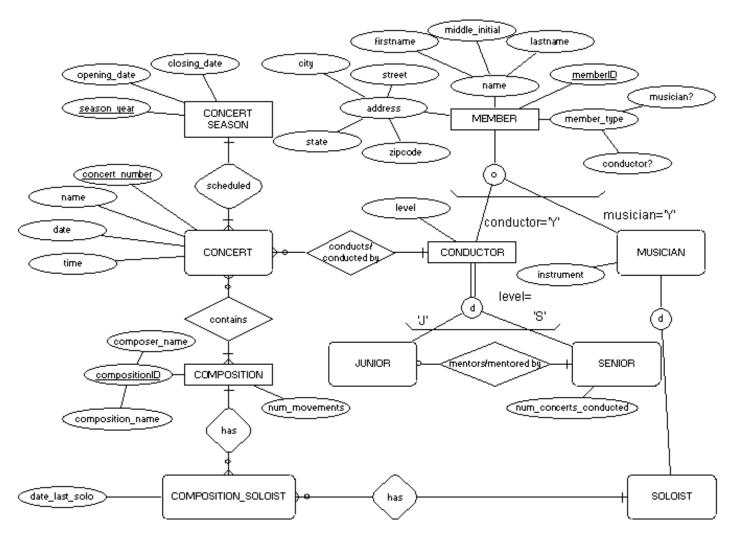
Due Date: Sunday night 6pm 11/24/2019 Must covert this word document to PDF

Note: submissions must be made to the appropriate dropbox in PDF format. This homework is required to be typed, not handwritten.

PART 1: Transposing an E-R Diagram (55 pts)

Transpose the E-R Diagram for RITPO into relations. Use the relational notation: RELNAME(KeyAttr, Attr1, Attr2, FK). *Italicize* or dash underline your foreign keys. Be sure to include a reference statement for each foreign key that follows the format:

CURRENT_TABLE(fkattribute(s)) must exist in ORIGINAL_TABLE(pkattribute(s)) Create & submit a PDF file called **yourname_HW7.pdf** to include all of the resulting relations.



Note: CONCERT.concert_number represents the number of the concert within the season. Therefore concert_numbers may be reused for each CONCERT SEASON.

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ANSWER:-

MEMBER(memberID, firstname, middle_name, lastname, zipcode, street, state, city, musician?, conductor?)

CONDUCTOR(memberID, level)

CONDUCTOR(memberID) must exist in MEMBER(memberID)

MUSICIAN(*memberID*, instrument)

MUSICIAN(memberID) must exist in MEMBER(memberID)

SENIOR(<u>memberID</u>, num_concerts_conducted)

SENIOR(memberID) must exist in CONDUCTOR(memberID)

JUNIOR(memberID, mentor memberID)

JUNIOR(memberID) must exist in CONDUCTOR(memberID)

JUNIOR(mentor memberID) must exist in SENIOR(memberID)

SOLOIST(*memberID*)

SOLOIST(memberID) must exist in MUSICIAN(memberID)

CONCERT SEASON(season_year, opening_date, closing_date)

CONCERT(concert number, season year, name, date, time, memberID)

CONCERT(season_year) must exist in CONCERT SEASON(season_year)

CONCERT(memberID) must exist in CONDUCT(memberID)

COMPOSITION(composer_name, composition_name, num_movements)

CONCERT COMPOSITION(concert number, season year, composer name, composition name)

CONCERT_COMPOSITION(concert_number, season_year) must exist in CONCERT(concert_number, season_year)

CONCERT_COMPOSITION(composer_name, composition_name) must exist in

COMPOSITION(composer name, composition name)

COMPOSITION_SOLOIST(composer_name, composition_name, memberID, date_last_solo)

COMPOSITION SOLOIST(composer name, composition name) must exist in

COMPOSITION(composer name, composition name)

COMPOSITION_SOLOIST(memberID) must exist in SOLOIST(memberID)