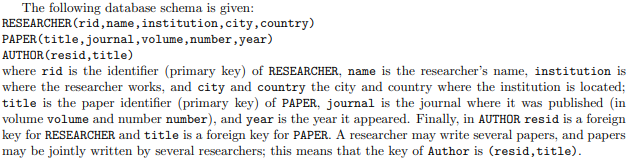
Homework 2

Jacob Taylor Cassady

CECS 535: Introduction to Databases



# List the names of authors of any paper published in journal “Databases” in 2019 in volume 12.

**SELECT** R.name

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A, PAPER **AS** P

**WHERE** R.rid = A.resid **and** P.title = A.title **and** P.journal = “Databases” **and** P.year = 2019 **and** P.volume=12

# List the names of authors who have published a paper in both “Nature” and in “Science” (journals).

**SELECT** name

**FROM** (**SELECT** name, rid

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A, PAPER **AS** P

**WHERE** R.rid = A.resid **and** P.title = A.title **and** R.journal = “Nature”)

**INTERSECT**

(**SELECT** name, rid

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A, PAPER **AS** P

**WHERE** R.rid = A.resid **and** P.title = A.title **and** R.journal = “Science”)

# List the names of authors who have published two or more papers in “Nature” (journal).

**SELECT** name

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A

**WHERE** R.rid = A.resid **and** R.rid **IN (SELECT** A.resid

**FROM** PAPER **AS** P, AUTHOR **AS** A

**WHERE** P.title = A.title

**GROUP BY** A.resid

**HAVING** sum(CASE journal=”Nature” 1 else 0) >= 2)

# List the names of authors who have published a paper in “Nature” but never in “Science” (journals).

**SELECT** name

**FROM** **(SELECT** name, rid

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A, PAPER **AS** P

**WHERE** R.rid = A.resid **and** P.title = A.title **and** R.journal = “Nature”)

**EXCEPT**

**(SELECT** name, rid

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A, PAPER **AS** P

**WHERE** R.rid = A.resid **and** P.title = A.title **and** R.journal = “Science”)

# List the names of authors who have published a paper in “Nature” (journal) alone (i.e. without co-authors).

**SELECT** name

**FROM** (**SELECT** name, resid

**FROM** RESEARCHER **AS** R, AUTHOR **AS** A

**WHERE** R.rid = A.resid **and** A.title **IN** (**SELECT** title

**FROM** (**SELECT** title, count(resid) **AS** aCount

**FROM** AUTHOR

**GROUP BY** title)

**WHERE** aCount = 1

# List the title of papers where all authors are from the same institution. Note: this includes sole authors too.

**SELECT** title

**FROM**

# Find out the average number of authors per paper.

# Find out the number of papers per country (count each paper once, regardless of the number of authors).

# List the number of papers per author (identified by author id) but count each paper in proportion to the number of authors. That is, if a paper has n authors, split the credit equally among them (1/n units of credit). Example: if researcher Ullman has 3 papers, one alone, one with somebody else, and one with two other co-authors, he gets 1, .5 and .3 units of credit respectively, for a total of 1.8 papers.

# List the journals that published more papers in 2019 than in 2018.