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--Exercise 6 Solutions

--SUMMARY OF AGE
SELECT MIN(age) AS "MIN(age)",
       MAX(age) AS "MAX(age)",
       SUM(age) AS "SUM(age)"
FROM patients;

--AVERAGE LENGTH OF CONTACT
SELECT AVG(end-start)
FROM casecontlink;

--CHECK THIS
SELECT start,
       end,
       (end-start) AS "Days"
FROM casecontlink;

--ARE THERE ANY ERRORS IN THE DATA?
--YES, THE RECORD WITH CONTACTCDC="002" HAS AN END DATE EARLIER THAN
THE START DATE!

--patients INNER JOIN casecontlink
--SHOWS ALL PATIENTS WITH THEIR CONTACTS
SELECT patients.CDCID,
       patients.stateID,
       contactCDC,
       contactstate
FROM patients
INNER JOIN casecontlink
ON (patients.CDCID = casecontlink.CDCID AND patients.stateID =
casecontlink.stateID);

--patients LEFT OUTER JOIN casecontlink
--SHOWS PATIENT 7 WITH NO CONTACTS
--USE LEFT OUTER JOIN
SELECT patients.CDCID,
       patients.stateID,
       contactCDC,
       contactstate
FROM patients
LEFT OUTER JOIN casecontlink
ON (patients.CDCID = casecontlink.CDCID AND patients.stateID =
casecontlink.stateID);

--patients LEFT OUTER JOIN casecontlink
--SHOWS EQUIVALENT RESULT, PATIENT 7 WITH NO CONTACTS
--USE RIGHT OUTER JOIN
SELECT patients.CDCID,
       patients.stateID,
       contactCDC,
       contactstate
FROM casecontlink
RIGHT OUTER JOIN patients
ON (patients.CDCID = casecontlink.CDCID AND patients.stateID =
casecontlink.stateID);

SELECT patients.CDCID,
       patients.stateID,
       contactCDC,

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        contactstate
    FROM patients
    RIGHT OUTER JOIN casecontlink
        ON (patients.CDCID = casecontlink.CDCID AND patients.stateID =
casecontlink.stateID);

--DISPLAY PATIENTS WITHOUT CONTACT ONLY
SELECT patients.CDCID,
        patients.stateID,
        contactCDC,
        contactstate
    FROM patients
    LEFT OUTER JOIN casecontlink
        ON (patients.CDCID = casecontlink.CDCID AND patients.stateID =
casecontlink.stateID)
    WHERE contactCDC IS NULL;

--DISPLAY THE NUMBER OF CONTACTS PER CASE
SELECT patients.CDCID,
        patients.stateID,
        COUNT(casecontlink.contactCDC) AS "Count(ContactCDC)"
    FROM patients
    LEFT OUTER JOIN casecontlink
        ON (patients.CDCID=casecontlink.CDCID AND
patients.stateID=casecontlink.stateID)
    GROUP BY patients.CDCID, patients.stateID;

--HOW MANY INDIVIDUALS IDENTIFIED A HOUSEHOLD CONTACT?
SELECT DISTINCT patients.cdcid, patients.stateid
    FROM patients
    LEFT OUTER JOIN casecontlink
        ON (patients.CDCID=casecontlink.CDCID AND
patients.stateID=casecontlink.stateID)
    WHERE nature="Same household";

--THERE ARE THREE CASES WITH A HOUSEHOLD CONTACT

--DISPLAY THE NUMBER OF CONTACT CLASSIFICATIONS
SELECT classif, COUNT(*) as ""Count"
    FROM contact
    GROUP BY classif;

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