Section 4 – Relational Algebra

Clinic(cid, name, street, state)
Equipment(eid, type, model)
Assignment(cid, eid)

Write a Relational Algebra expression in the form of a logical query plan (i.e., draw a tree) that is equivalent to the SQL query below:

SELECT COUNT(*) FROM Clinic C
WHERE NOT EXISTS (  
    SELECT * FROM Assignment A, Equipment E  
    WHERE C.cid = A.cid  
    AND A.eid = E.eid  
    AND E.type = 'Fridge'  
    AND E.model = 1004  
);
Write a Relational Algebra expression in the form of a logical query plan that is equivalent to the SQL query below.

```sql
SELECT O1.category, MAX(ABS(O1.price - O2.price))
FROM Gift G1, Gift G2, Item O1, Item O2
WHERE G1.pid = G2.rid
  AND G2.pid = G1.rid
  AND O1.oid = G1.oid
  AND O2.oid = G2.oid
  AND O1.category = O2.category
GROUP BY O1.category
HAVING count(*) > 5;
```