

⑥ Suppliers (sid, sname, address)

Part (pid, pname, color)

Catalog (sid, pid, price)

1.) select c1.sid, c2.sid

From Catalog C1, Catalog C2

Where C1.pid = C2.pid AND C1.price > C2.price

2.) select s.sid

From Supplier S

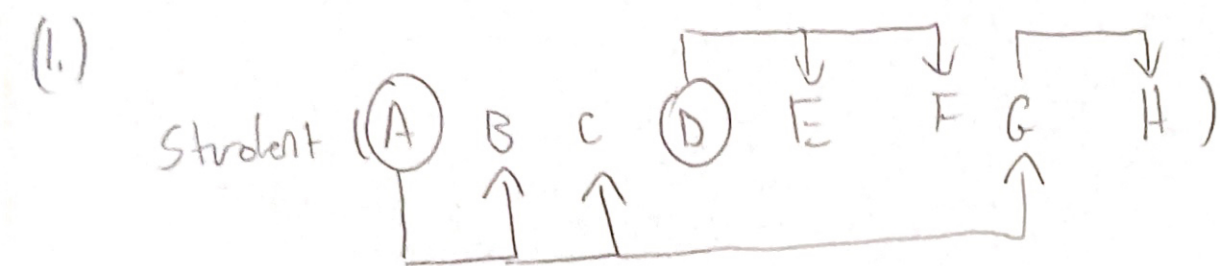
Where S.address = 'Austin City' or (select C.sid

From Catalog C, Part P

Where C.pid = P.pid AND P.color = 'Red');

7.3-?

8. R A B C D E F G H
 Student (SSN, SName, Saddress, HScore, HSname, Hscity, GPA, priority)



R (A B C D E F G H)

$A \rightarrow BCG$
 $D \rightarrow EF$
 $G \rightarrow H$

\rightarrow Pd, not in BCNF
 \rightarrow Pd, Not in BCNF
 \rightarrow not in BCNF

using $G \rightarrow H$

$\hookrightarrow R_1 (GH)$

$R_2 (G A B C D E F)$

using $A \rightarrow BCG$

$\hookrightarrow R_{21} (A B C G)$

$\hookrightarrow R_{22} (AD)$

using $D \rightarrow EF$

$\hookrightarrow R_{221} (D E F)$

$\hookrightarrow R_{222} (D G A B C)$

R (A B C D E F G H)

$\hookrightarrow R_1 (GH)$

$\hookrightarrow R_2 (A B C G)$

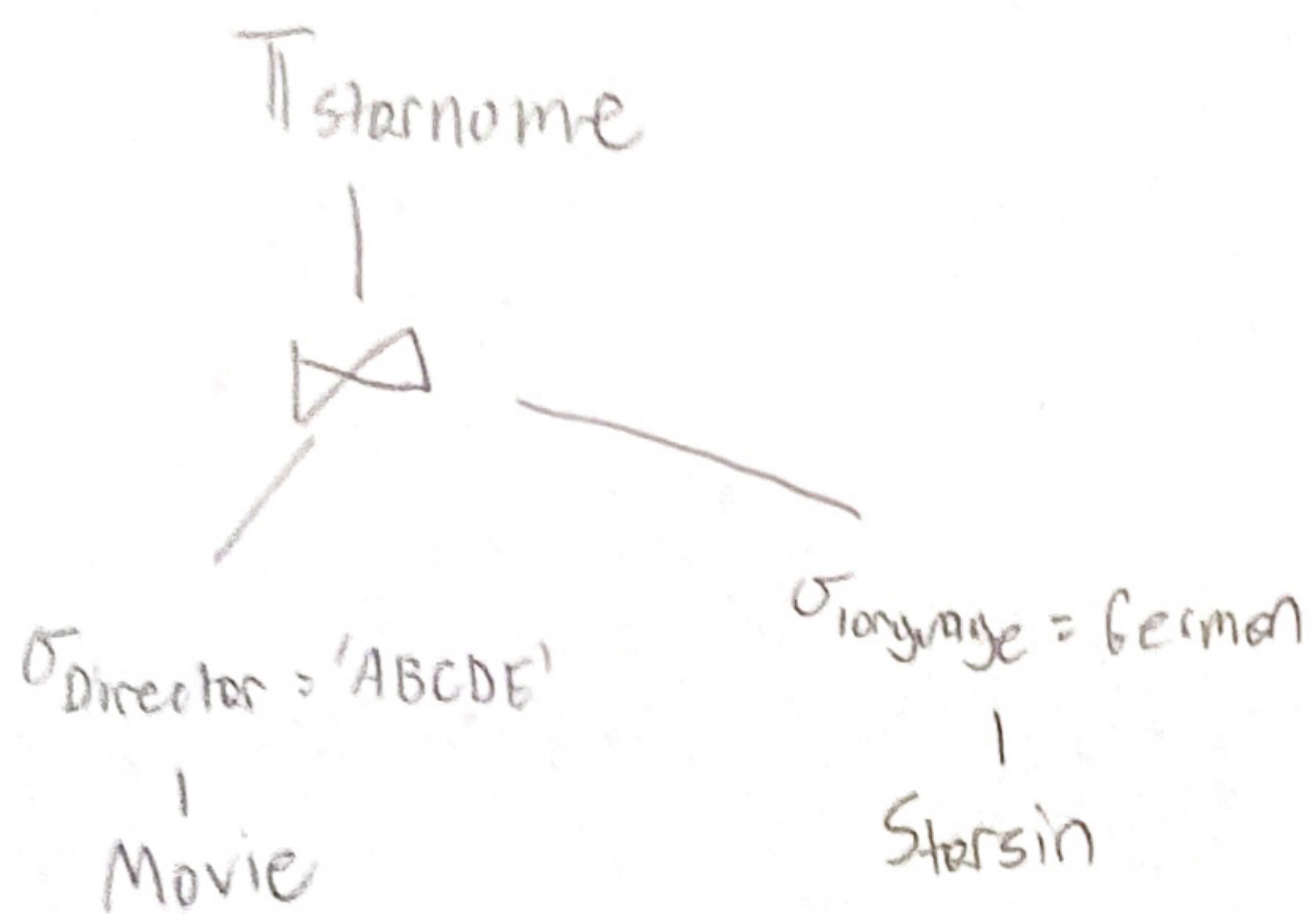
$\hookrightarrow R_3 (AD)$

$\hookrightarrow R_4 (D E F)$

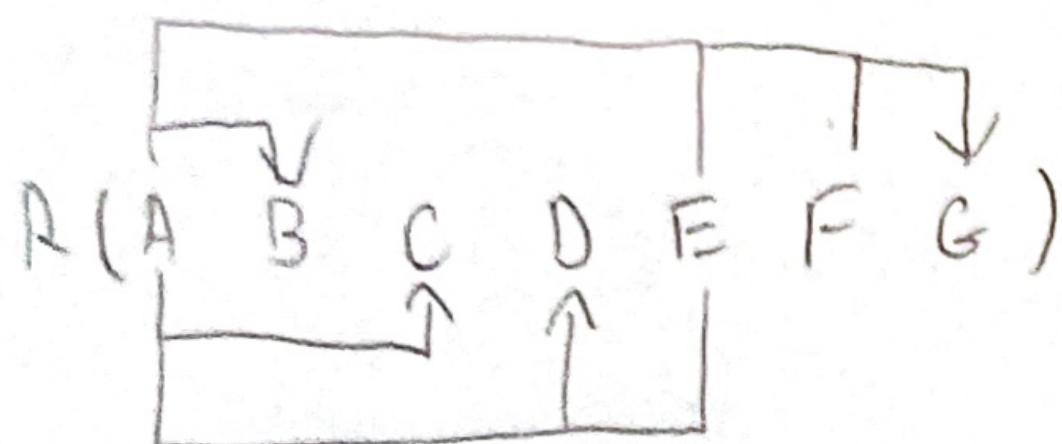
- (2.)
- Syntactic checks: Making sure the syntax of every operator is correct.
 - Entity checks: Making sure that all relation names refer to a valid relation.
 - Attribute checks: Making sure every attribute name refers to a valid attribute.
 - View Expansion: Replace the relation node with a parse tree view if a relation name refers to a view.
 - Tree checks: Make sure each attribute participating in an expression has the proper type.

10.

(1.)



(2)



using

$A \rightarrow B$

$A \rightarrow C$

$A E \rightarrow D$

$A E F \rightarrow G$

using $A \rightarrow B$

$\hookrightarrow R_1(AB)$

$\hookrightarrow R_2(A C D E F G)$

using $A \rightarrow C$

$\hookrightarrow R_{21}(AC)$

$\hookrightarrow R_{22}(A D E F G)$

using $A E \rightarrow D$

$\hookrightarrow R_{221}(A E D)$

$\hookrightarrow R_{222}(A E F G)$

using $A E F \rightarrow G$

$\hookrightarrow R_{2221}(A E F G)$

$\hookrightarrow R_{2222}(A B C D)$

b) $R_1(ABC)$

$R_2(AED)$

$R_3(AEFG)$