3 queries with 2 relations, 3 queries with 3 relations, 2 queries with 4 relations

2-relation queries:

R1. Character that Attends Hogwarts and Blood Status is ‘PB’ for Pure Blood as a Cartesian Product.

Projected out these attributes cname, attends\_by and blood\_status.

R1 ← cname, attends\_by, blood\_status (Attends\_by = ‘Hogwarts’ and Blood\_Status = ‘PB’

(Characters) X (School))

SQL> create table R1 as

2 select cname, attends\_by, blood\_status from school, characters

3 where characters.attends\_by='Hogwarts' and characters.blood\_status='PB';

R2. Character that affiliated with death eaters and owns a wand and projected out these attributes: wname,

instructs and length.

R2 ← wname, instructs, length (instructs = ‘Death Eaters’ (Characters) X (Wand))

SQL> create table R2 as

2 select wname, instructs, length from characters, wand

3 where characters.instructs='Death Eaters';

R3. Spell, that is incantation is Diffindo and seen\_mentione at ‘by Ron Weasley’ and projected out these

Attributes incantation, sm\_incantation and sm\_seen\_mention.

R3 ← incantation, sm\_incantation, sm\_seen\_mention (incantation=‘Diffindo’ (Spells) X

sm\_seen\_mention=‘By Ron Weasley’ (Seen\_mention))

SQL> create table R3 as

2 select incantation, sm\_incantation, sm\_seen\_mention from spells, seen\_mention

3 where spells.incantation='Diffindo' and seen\_mention.sm\_seen\_mention='By Ron Weasley';

3-relation queries:

R4. Character that is affiliated with ‘OotP’(instructs), birth date is older than 14-JUL-2007, and attends

any school. Projected out these attributes: instructs, bdate, attends\_by and headquarters.

R4 ← instructs, Bdate, attends\_by, headquarters (instructs=‘OotP’and Bdate>’14-JUL-2002’

(Characters) X (Faction))

SQL> create table R4 as

2 select instructs, Bdate, attends\_by, headquarters from characters, faction

3 where characters.instructs='OotP' and Bdate > '14-JUL-2002';

R5. A Spell that is a charm, that can be cast by Harry potter joined tables and the joined table in cartesian

product with Characters table that is half blood and marital status is married. Projected out these

attributes cincantation, incantation, type, cname, blood\_status.

R5 ← cincantation, incantation, type, cname, blood\_status ((type=’Charm’

(Spells)) incantation = cincantation (ca\_name=’Harry Potter’ (Casts)) X

(blood\_status=’HB’ and marital\_status=’M’(Characters))

SQL> create table R5 as

2 select cincantation, incantation, type, ca\_name, blood\_status from spells, casts, characters

3 where spells.incantation=casts.cincantation and spells.type='Charm' and casts.ca\_name='Harry Potter'

and characters.blood\_status='HB' and marital\_status='M';

R6. Character that can cast ‘Bombarda’, owns a wand , and Affiliates with The Ministry of Magic

(‘MoM’, Faction). Projected out these attributes cincantation, wname, fac\_name.

R3 ← cincantation, wname, fac\_name (cincantation=‘Bombarda’ (Casts) X

wname>’NULL’ (Wand) X fac\_name=’British Ministry of Magic’ (Affiliates))

SQL> create table R6 as

2 select cincantation, wname, fac\_name from casts, wand, affiliates

3 where casts.cincantation='Bombarda' and wand.wname > 'NULL' and affiliates.fac\_name='British

Ministry of Magic';

4-relation queries:

R7. Character with house attribute = Gryffindor, that Attends Hogwarts(School), has a Wand shorter than

or equal to 08.00 inches, Cast ‘Alohomora’, eye color is black and skin and hair color is gray all in a

Cartesian product outcome. Projected out these attributes house, attends\_by (renamed)

school\_attended , length (renamed) length\_of\_wand, cincantation

cast\_incantation, and type.

R3 ← **ρ**house attends\_byschool\_attended , length length\_of\_wand, cincantation

cast\_incantation, type (house=’Gryffindor’ and attends\_by=’Hogwarts’(Characters) X

length<=8.00(Wand) X cincantation=’Alohomora’(Casts) X eye\_color=’Black’ and

skin=’Gray’ and hair\_color=’Gray’(Species))

SQL> create table R7 as

2 select house, attends\_by school\_attended, length length\_of\_wand, cincantation cast\_incantation, type

from\_species\_type, eye\_color, skin, hair\_color from characters, wand, casts, species

3 where characters.house='Gryffindor' and characters.attends\_by='Hogwarts' and wand.length<=08.00

and casts.cincantation='Alohomora' and eye\_color='Black' and skin='Gray' and hair\_color='Gray';

R8. Character that is marital status is divorced, has a wand equal in length to 09.00 inches, blood status is

Half-blooded and from the faction table was founded prior or equal to January 1, 1700. Projected these

attributes out cname, marital\_status, length (renamed) wand\_length,

and blood\_status.

R3 ← **ρ**cname, marital\_status, length wand\_length, blood\_status (cname=’Severus Snape’

Marital\_status=’D’and blood\_status=’HB’(Characters) X length=09.00(Wand) X

founded<=’01-JAN1700’(Faction))

SQL> create table R8 as

2 select cname, marital\_status, length wand\_length, blood\_status from characters, wand, spells, faction

3 where characters.cname='Severus Snape' and characters.marital\_status='D' and length=9.00 and

blood\_status='HB' and faction.founded<='01-JAN-1700';