1. List the names of all nerds who are friends with a jock whose name starts with ‘J’.

SELECT nerd.name

FROM nerd

WHERE EXISTS (

SELECT jock.name

FROM jock INNER JOIN friends

ON jock.ssn = friends.jssn

WHERE jock.name LIKE ‘J%’ AND friends.nssn = nerd.ssn);

+--------+

| name |

+--------+

| Rachel |

| Carol |

+--------+

2. List the favorite sport of all jocks who are friends with female nerds.

SELECT sport.name, sport.jssn

FROM sport

WHERE EXISTS (

SELECT nerd.gender

FROM nerd INNER JOIN friends INNER JOIN jock

ON nerd.ssn = friends.nssn AND friends.jssn = jock.ssn

WHERE nerd.gender = ‘F’ AND jock.ssn = sport.jssn);

+-------------------+-----------+

| name | jssn |

+-------------------+-----------+

| Soccer | 116168223 |

| American Football | 116254857 |

| Soccer | 116318704 |

| American Football | 116452994 |

+-------------------+-----------+

3. List the favorite video games and ssn of nerds who are friends with jocks whose favorite sport is Soccer.

SELECT favorite\_video\_games, nerd.ssn

FROM nerd

WHERE EXISTS (

SELECT sport.name

FROM sport INNER JOIN jock INNER JOIN friends

ON sport.jssn = jock.ssn AND jock.ssn = friends.jssn

WHERE sport.name = ‘Soccer’ AND friends.nssn = nerd.ssn);

+------------------------------------------+-----------+

| favorite\_video\_games | ssn |

+------------------------------------------+-----------+

| Doom | Resident Evil | Left 4 Dead | 116357133 |

| Halo | Call of Duty | Destiny 2 | 116431894 |

| Overwatch | MarioKart | Yoshi’s Island | 116783065 |

+------------------------------------------+-----------+

4. List the names of all nerds whose favorite Magic card is red who don’t have Samsung cell phones.

SELECT nerd.name

FROM nerd INNER JOIN mtg\_card

ON nerd.ssn = mtg\_card.nssn

WHERE mtg\_card.color = ‘Red’ AND NOT EXISTS (

SELECT nerd\_cell\_phone.phone\_type

FROM nerd\_cell\_phone

WHERE nerd\_cell\_phone.phone\_type LIKE ‘%Make: S%’ AND nerd\_cell\_phone.nssn = nerd.ssn);

+-------+

| name |

+-------+

| Carol |

| Sally |

+-------+

5. List the nssn and phone color of nerds whose favorite Magic card is not a creature.

SELECT nerd\_cell\_phone.color, nerd\_cell\_phone.nssn

FROM nerd\_cell\_phone

WHERE NOT EXISTS (

SELECT card\_type

FROM mtg\_card

WHERE card\_type = ‘Creature’ AND mtg\_card.nssn = nerd\_cell\_phone.nssn);

+--------+-----------+

| color | nssn |

+--------+-----------+

| Gold | 116212998 |

| Pink | 116283961 |

| Silver | 116355793 |

| Silver | 116431894 |

| Black | 116783065 |

+--------+-----------+

6. List the ssn and phone types of all nerds who are friends with a jock whose cell phone is not silver.

SELECT nerd\_cell\_phone.phone\_type, nerd\_cell\_phone.nssn

FROM nerd\_cell\_phone

WHERE NOT EXISTS (

SELECT jock\_cell\_phone.color

FROM jock\_cell\_phone INNER JOIN jock INNER JOIN friends

ON jock\_cell\_phone.jssn = jock.ssn AND jock.ssn = friends.jssn

WHERE jock\_cell\_phone.color = ‘Silver’ AND friends.nssn = nerd\_cell\_phone.nssn);

+---------------------------------+-----------+

| phone\_type | nssn |

+---------------------------------+-----------+

| Make: Apple, Model: iPhone 7 | 116098332 |

| Make: Samsung, Model: Galaxy S8 | 116212998 |

| Make: Apple, Model: iPhone 7 | 116357133 |

| Make: Samsung, Model: Galaxy S8 | 116431894 |

| Make: Apple, Model: iPhone 7 | 116783065 |

| Make: Apple, Model: iPhone 7 | 116927677 |

+---------------------------------+-----------+

7. List the ssn and favorite Magic card name of the nerds who are friends with a jock whose favorite sport was not invented in the USA.

SELECT mtg\_card.nssn, mtg\_card.name

FROM mtg\_card

WHERE NOT EXISTS (

SELECT sport.country

FROM sport INNER JOIN jock INNER JOIN friends

ON sport.jssn = jock.ssn AND jock.ssn = friends.jssn

WHERE sport.country = ‘USA’ AND friends.nssn = mtg\_card.nssn);

+-----------+--------------------------+

| nssn | name |

+-----------+--------------------------+

| 116212998 | Supreme Verdict |

| 116328931 | Puppeteer Clique |

| 116355793 | Ashiok, Nightmare Weaver |

| 116357133 | Goblin Guide |

| 116431894 | Counterspell |

| 116783065 | Lightning Bolt |

| 116927677 | Sliver Queen |

+-----------+--------------------------+

8. Select the Magic card name and price of all Magic cards whose price is lower than the price of the most expensive card.

SELECT mtg\_card.name, mtg\_card.avg\_price

FROM mtg\_card

WHERE mtg\_card.avg\_price < (

SELECT max(mtg\_card.avg\_price)

FROM mtg\_card);

+--------------------------+-----------+

| name | avg\_price |

+--------------------------+-----------+

| Serra Avatar | 0.70 |

| Supreme Verdict | 6.20 |

| Dead Drop | 0.10 |

| Puppeteer Clique | 5.59 |

| Ashiok, Nightmare Weaver | 4.92 |

| Goblin Guide | 9.17 |

| Charging Badger | 0.11 |

| Counterspell | 1.70 |

| Lightning Bolt | 2.25 |

+--------------------------+-----------+

9. List the Magic card names where at least two cards of that card’s type are a nerd’s favorite

SELECT c.name

FROM mtg\_card c

WHERE 2 <= (

SELECT COUNT(mtg\_card.card\_type)

FROM mtg\_card

WHERE mtg\_card.card\_type = c.card\_type);

+------------------+

| name |

+------------------+

| Serra Avatar |

| Supreme Verdict |

| Dead Drop |

| Puppeteer Clique |

| Goblin Guide |

| Charging Badger |

| Counterspell |

| Lightning Bolt |

| Sliver Queen |

+------------------+