Activity 3:

Multi-table queries

Exercise #1:

For three tables R, S, T that only have one attribute A:

- R = {1,2,3,4,5}
- S = {1,3,5,7,9}
- T = {1,4,7,10}

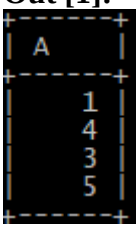
Write a query to select $R \cap (S \cup T)$- in other words elements that are in R and either S or T?

Write your query here:

In [1]:

```
SELECT DISTINCT R.A
FROM R, S, T
WHERE R.A = S.A OR R.A = T.A;
```

Out [1]:



A
1
4
3
5

- Now test your query above for the case where $S = \emptyset$- what happens and why?

It would be an empty set because S is empty.

- Execute the below, then re-run your query above

In [2]:

```
%%sql
delete from S;
```

Out [2]:

Empty set

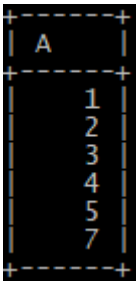
Write a query to select $R \cup (S \cap T)$?

Write your query here:

In [1]:

```
SELECT DISTINCT R.A
FROM R, S, T
WHERE R.A = R.A OR S.A = T.A;
```

Out [1]:



A
1
2
3
4
5
7

Exercise #2

- Schema is same as before

Product (PName, price, category, manufacturer)
Company (Cname, stockPrice, country)

- Our goal is to answer the following question:

Find all categories of products that are made by Chinese companies

Write your query here:

In [3]:

```
SELECT DISTINCT p.category
FROM Product p, Company c\n
WHERE p.manufacturer = c.Cname
AND c.country = 'China';
```

Out [3]:
?