--#1

--OG

--SELECT pack\_id, speed , sector\_id

--FROM acdb\_packages

--WHERE sector\_id =(SELECT sector\_id FROM acdb\_packages WHERE pack\_id = 10);

--Transformed

--select A.PACK\_ID, A.SPEED, A.SECTOR\_ID

--from **ACDB\_PACKAGES a, ACDB\_PACKAGES b**

--where B.PACK\_ID = 10 and A.SECTOR\_ID = B.SECTOR\_ID;

--#2

--OG

--SELECT first\_name , last\_name , join\_date

--FROM acdb\_customers

--WHERE extract(year from join\_date) =

--(SELECT extract (year from join\_date) FROM acdb\_customers WHERE customer\_id = 372)

--**AND**

--extract (month from join\_date) =

--(SELECT extract (month from join\_date) FROM acdb\_customers WHERE customer\_id = 372);

--Transformed

--select a.first\_name , a.last\_name , a.join\_date

--from acdb\_customers a, acdb\_customers b

--where extract(year from a.join\_date) = extract(year from b.join\_date) and b.customer\_id = 372

--**intersect**

--select a.first\_name, a.last\_name, a.join\_date

--from acdb\_customers a, acdb\_customers b

--where extract(month from a.join\_date) = extract(month from b.join\_date) and b.customer\_id = 372;

--#3

--OG

--SELECT first\_name , last\_name , city , state, pack\_id

--FROM acdb\_customers

--WHERE pack\_id IN (SELECT pack\_id FROM acdb\_packages WHERE speed = '5Mbps');

--Transformed

--select c.first\_name, c.last\_name, c.city, c.state, c.pack\_id

--from **acdb\_customers c, acdb\_packages p**

--where c.pack\_id = p.pack\_id and p.speed = '5Mbps';

--#4

--OG

--SELECT first\_name , monthly\_discount , pack\_id , main\_phone\_num, secondary\_phone\_num

--FROM acdb\_customers

--WHERE pack\_id IN (SELECT pack\_id FROM acdb\_packages WHERE sector\_id IN

--(SELECT sector\_id FROM acdb\_sectors WHERE sector\_name = 'Business'));

--Transformed

--select c.first\_name, c.monthly\_discount, c.pack\_id, c.main\_phone\_num, c.secondary\_phone\_num

--from **acdb\_customers c, acdb\_packages p, acdb\_sectors s**

--where c.pack\_id = p.pack\_id and p.sector\_id = s.sector\_id and s.sector\_name = 'Business';

--#5

--OG

--SELECT customer\_id , first\_name , city , state ,birth\_date , monthly\_discount

--FROM acdb\_customers

--WHERE **birth\_date** = (SELECT birth\_date FROM acdb\_customers WHERE customer\_id = 179)

--**AND**

--**monthly\_discount** > (SELECT monthly\_discount FROM acdb\_customers WHERE customer\_id = 107);

--Transformed

--select a.customer\_id, a.first\_name, a.city, a.state, a.birth\_date, a.monthly\_discount

--from **acdb\_customers a, acdb\_customers b, acdb\_customers c**

--where a.birth\_date = b.birth\_date and b.customer\_id = 179 and a.monthly\_discount > c.monthly\_discount and c.customer\_id = 107;

--#6: **ALL -> NOT EXIST**

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages

--WHERE **monthly\_payment**

--**> ALL**(SELECT monthly\_payment FROM acdb\_packages WHERE speed = '5Mbps');

--Tranformed

--select a.pack\_id, a.speed, a.monthly\_payment

--from acdb\_packages a

--where **not exists**(select a.monthly\_payment from acdb\_packages b where **a.monthly\_payment <= b.monthly\_payment** and B.SPEED = '5Mbps');

--#7: **ANY -> EXIST**

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages

--WHERE **monthly\_payment >**

--**ANY** (SELECT monthly\_payment FROM acdb\_packages WHERE speed = '5Mbps');

--Transformed

--select a.pack\_id, a.speed, a.monthly\_payment

--from acdb\_packages a

--where **exists**(select a.monthly\_payment from acdb\_packages b where b.speed='5Mbps' and **a.monthly\_payment > b.monthly\_payment**);

--#8

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages p1

--WHERE **EXISTS** (select \* FROM acdb\_packages p2 WHERE p2.speed = '5Mbps'

--and p1.monthly\_payment <= p2.monthly\_payment);

--Transfromed

--select PACK\_ID, SPEED, MONTHLY\_PAYMENT

--from ACDB\_PACKAGES a

--where (select **COUNT(\*)** from ACDB\_PACKAGES b where B.SPEED = '5Mbps' and A.MONTHLY\_PAYMENT <= B.MONTHLY\_PAYMENT) **> 0**;

--#9 **x in (select y ~) -> exists(~ where x=y)**

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages p1

--WHERE **p1.pack\_id IN** (select **p2.pack\_id** FROM acdb\_packages p2 WHERE p2.speed = '5Mbps' AND p1.monthly\_payment <= p2.monthly\_payment);

--Transformed

--select A.PACK\_ID, A.SPEED, A.MONTHLY\_PAYMENT

--from ACDB\_PACKAGES a

--where **exists** (select A.PACK\_ID from ACDB\_PACKAGES b where **A.PACK\_ID = B.PACK\_ID** and B.SPEED = '5Mbps' and A.MONTHLY\_PAYMENT <= B.MONTHLY\_PAYMENT);

--#10

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages p1

--WHERE **p1.pack\_id** **NOT IN** (select **p2.pack\_id** FROM acdb\_packages p2 WHERE p2.speed = '5Mbps'

--AND p1.monthly\_payment <= p2.monthly\_payment);

--Transformed

--select A.PACK\_ID, A.SPEED, A.MONTHLY\_PAYMENT

--from ACDB\_PACKAGES a

--where **not exists** (select **B.PACK\_ID** from ACDB\_PACKAGES b where **A.PACK\_ID = B.PACK\_ID** and B.SPEED = '5Mbps' and A.MONTHLY\_PAYMENT <= B.MONTHLY\_PAYMENT);

--#11 Aggregation -> SELECT

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages

--WHERE **monthly\_payment** **> ALL**(SELECT monthly\_payment FROM acdb\_packages WHERE speed = '5Mbps');

--Transformed

--select a.pack\_id, a.speed, a.monthly\_payment

--from acdb\_packages a

--where **a.monthly\_payment** **>** (select **max**(b.monthly\_payment) from acdb\_packages b where b.speed='5Mbps');

--#12

--OG

--SELECT pack\_id ,speed , monthly\_payment

--FROM acdb\_packages

--WHERE monthly\_payment **> SOME**(SELECT monthly\_payment FROM acdb\_packages WHERE speed = '5Mbps');

--Transformed

--select A.PACK\_ID, A.SPEED, A.MONTHLY\_PAYMENT

--from ACDB\_PACKAGES a

--where A.MONTHLY\_PAYMENT **>** (select **MIN**(B.MONTHLY\_PAYMENT) from ACDB\_PACKAGES b where B.SPEED = '5Mbps');