A Graph Search query (Facebook)

find all my friends who have online update records from UK

- **friend**(uid, fid)
- **update**(id, uid, country, date, post, ...)

friend	
uid	fid
uid0	uid18
uid1	uid11
uid1	uid18
. . .	. . .

update					
id	uid	country	date	post	...
001	uid18	US	20160103	post#1	...
002	uid11	UK	20150103	post#2	...
003	uid11	UK	20170103	photo#3	...
. . .	. . .	. . .	. . .	. . .	. . .

```sql
SELECT fid
FROM   friend AS f, update AS u
WHERE  f.uid= uid1 AND f.fid=u.uid AND u.country=UK
```

my uid

How does DBMS evaluate the query?

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- **update**(id, uid, country, date, post, ...)

friend	
uid	**fid**
1 uid0	uid18
2 uid1	uid11
3 uid1	uid18
...	...

update					
id	**uid**	**country**	**date**	**post**	**...**
1 001	uid18	US	20160103	post#1	...
2 002	uid11	UK	20150103	post#2	...
3 003	uid11	UK	20170103	photo#3	...
...	...	...	...	...	...

```
SELECT  fid
FROM    friend AS f, update AS u
WHERE   f.uid= uid1 AND f.fid=u.uid AND u.country=UK
```

my uid

How does DBMS evaluate the query?

A Conventional Query Plan

find all my friends who have online update records from UK

- **friend**(uid, fid)

- **update**(id, uid, country, date, post, ...)

```
SELECT  fid
FROM    friend AS f, update AS u
WHERE   f.uid= uid1 AND f.fid=u.uid AND u.country=UK
```

A Conventional DBMS plan