Relational Algebra

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(Ödev 1 – Veritabanı - SQL)

1-) $\Pi_{malzeme.*}(\sigma_{①}(musteri \times siparis \times kullan \times malzeme))$

① $madi = 'Ali' \wedge msoyadi = 'Kurt'$
$musteri.mno = siparis.mno \wedge siparis.yno = kullan.yno \wedge$
$malzeme.zno = kullan.zno$

2-) $\Pi_{yemek.*}(\sigma_{①}(\rho_{malno}(② - ③) \times kullan \times yemek))$

① $malno = kullan.zno \wedge$
$kullan.yno = yemek.yno$

② $\Pi_{malzeme.zno}(Malzeme)$

③ $\Pi_{malzeme.zno}(\sigma_{④}(yemek \times kullan \times malzeme))$

④ $yadi = 'Kuru\ fasulye' \wedge yemek.yno = kullan.yno \wedge$
$malzeme.zno = kullan.zno$

3-) (1, 3) ∩ (1, 4)

(1, X) $\Pi_{musteri.*}(\sigma_{②}(malzeme \times kullan \times siparis \times musteri))$

X

$\wedge\ malzeme.zno = kullan.zno \wedge$

$siparis.yno = kullan.yno \wedge musteri.mno = siparis.mno$

③ $zadi = 'Domates'$
④ $zadi = 'Kereviz'$

NOT: ① ③ / ② (1, X) Gibi yerlere, altında tanımlı olan gelecek.

4-) $\Pi_{madi,msoyadi}\left(\sigma_{①}(musteri \times kullan \times malzeme \times siparis)\right)$

① $musteri.mno = siparis.mno \wedge kullan.yno = siparis.yno \wedge$

$kullan.zno = malzeme.zno \wedge zadi = 'Domates'$

5-) $\vartheta_{zadi}\left(\Pi_{zadi,\ count(yno),\ avg(miktar)}\left(\sigma_{①}(malzeme \times kullan)\right)\right)$

$count(zno) >= 3$

① $malzeme.zno = kullan.zno$