

67506) מסדי נתונים | תרגיל 2

שם: קונסטנטין פרסטין, אליהו תמרקין | ת"ז: 208672964,342851276

14 באפריל 2023

שאלה 1

1.

$\pi_{name}(\sigma_{educatedAt='Hebrew University of Jerusalem' \wedge birthYear > 1970}(members))$

2.

$\pi_{name,party}(\sigma_{number=1}(members \bowtie memberInKnesset))$

3.

$\pi_{name,number}(\sigma_{startYear-birthYear > 70 \wedge (party='Likud' \vee party='Meretz')}(members \bowtie memberInKnesset \bowtie knesets))$

4.

$A = \pi_{name,uid}(\sigma_{gender='female' \wedge occupation \neq 'politician' \wedge number=23}(members \bowtie memberInKnesset))$

$B = \pi_{name,uid}(\sigma_{gender='female' \wedge occupation \neq 'politician' \wedge number=24}(members \bowtie memberInKnesset))$

$\pi_{name}(A \cap B)$

$$R = \pi_{uid,name,number} (\sigma_{birthPlace='Jerusalem'} (members) \bowtie memberInKnesset)$$

$$P = \pi_{uid,name} \left(\sigma_{number1 \neq number2} \left(\rho_{R1(uid,name,number1)} (R) \bowtie \rho_{R2(uid,name,number2)} (R) \right) \right)$$

$$\pi_{name} (\pi_{uid,name} (\sigma_{birthPlace='Jerusalem'} (members)) - P)$$

$$R = \pi_{number} (\sigma_{name='David Ben Gurion' \wedge party='Mapai'} (members \bowtie memberInKnesset))$$

$$P = \pi_{uid,name,number} (members \bowtie \sigma_{party='Mapai'} (memberInKnesset))$$

$$\pi_{name} (P \div R)$$

$$R = \pi_{uid,name,birthYear,number} (members \bowtie memberInKnesset)$$

$$P' = \sigma_{birthYear1 > birthYear2 \wedge number1 = number2} \left(\rho_{R1(uid1,name1,birthYear1,number1)} (R) \times \rho_{R2(uid2,name2,birthYear2,number2)} (R) \right)$$

$$P = \pi_{uid1,name1,birthYear1,number1} (P')$$

$$\pi_{name,number} \left(R - \rho_{P(uid,name,birthYear,number)} (P) \right)$$