

שאלות אלגברה יחסית

שאלתה 1

1) $\Pi \text{title}(\sigma_{\text{beginning} \geq 2016-01-01 \wedge \text{ending} < 2017-01-01} \text{ record})$

שאלתה 2

2) $\Pi \text{name, title}(\Pi_{\text{id}} \sigma_{\text{name} = \text{David Bowie}} (\sigma_{\text{m_id}(\sigma_{\text{s_id}}(\Pi \text{title} \sigma_{\text{recordDate} \geq 2016-01-01 \wedge \text{recordDate} < 2017-01-01} \bowtie \text{song}) \bowtie \text{musicains_song}) \bowtie \text{musicians}) \bowtie \text{people})$

שאלתה 3

3) $\Pi \text{name, title}(\Pi_{\text{id}} \sigma_{\text{name} = \text{David Bowie}} (\sigma_{\text{m_id}(\sigma_{\text{s_id}}(\sigma_{\text{r_id}}(\Pi \text{title} \sigma_{\text{recordDate} \geq 2016-01-01 \wedge \text{recordDate} < 2017-01-01} \text{ record}) \bowtie \text{song}) \bowtie \text{musicains_song}) \bowtie \text{musicians}) \bowtie \text{people})$

שאלתה 4

4) $\Pi \text{type, count}(\text{i_id})(\sigma_{\text{i_id}}(\sigma_{\text{i_id}} \text{count}(\text{i_id}) \text{musicians_instrument}) \bowtie \text{instrument})$

שאלתה 5

5)
 $\Pi \text{type, snum, company}(\Pi_{\text{company}} \sigma_{\text{im_id}}(\Pi_{\text{type}} \sigma_{\text{i_id}}(\Pi_{\text{snum}} \sigma_{\text{m_id}}(\sigma_{\text{m_id}}(\sigma_{\text{s_id}} (\Pi_{\text{r_id}} \sigma_{\text{title} = \text{'views'}} \text{ record}) \bowtie \text{song}) \bowtie \text{musicians_song}) \bowtie \text{musicians}) \bowtie \text{musicians_instrument}) \bowtie \text{instrument}) \bowtie \text{manufacturer})$

שאלתה 6

6) $\Pi_{\text{name,address,phone,count(id)}(\sigma_{\text{id}(\sigma_{\text{p_id}}(\sigma_{\text{r_id}}(\Pi_{\text{r_id}}\sigma_{\text{beginning} \geq 1966-01-01 \wedge \text{ending} < 2017-01-01} \text{ record}) \bowtie \text{recordproducer}) \bowtie \text{producer}) \bowtie \text{people})$

שאלתה 7

7) $\Pi_{\text{company,count(im_id)}(\sigma_{\text{id}}(\sigma_{\text{m_id}}(\sigma_{\text{i_id}}(\Pi_{\text{im_id}} \text{ count(im_id)} \wedge (\Pi_{\text{company}}\sigma_{\text{im_id manufacturer}) \bowtie \text{instrumentemt}) \bowtie \text{musicians_instrument}) \bowtie \text{musicians_song}) \bowtie \text{song})$

שאלתה 8

8) $\Pi_{\text{count(m_id)}(\sigma_{\text{m_id}}(\sigma_{\text{m_id}} \text{ count(m_id)} \text{ musicians_song}) \bowtie \text{musicians})$

שאלתה 9

9) $\Pi_{\text{people.name,count(join_m_id)}(\sigma_{\text{id}}(\sigma_{\text{m_id}}(\Pi_{\text{join_m_id}}\sigma_{\text{count(join_m_id)} \text{ musicians_song}) \bowtie \text{musicians}) \bowtie \text{people})$

שאלתה 10

10) $\Pi_{\text{genre,count(genre_id)}(\sigma_{\text{genre_id}}(\sigma_{\text{id}} \text{ count(genre_id)} \text{ song}) \bowtie \text{genre})$

שאלתה 11

11) $\Pi_{\text{name,count(t_id)}(\sigma_{\text{id}}(\sigma_{\text{t_id}}(\sigma_{\text{id}} \text{ count(t_id)} \wedge (\text{recordDate} \geq 2010-01-01 \wedge \text{recordDate} < 2020-01-01) \text{ song}) \bowtie \text{technician}) \bowtie \text{people})$

שאלתה 12

12) $\Pi_{\text{title}}(\sigma_{\text{min}(\text{beginning})} \text{ record})$

שאלתה 14

14) $\rho(s1, \text{song})$

$\rho(s2, \text{song})$

$\Pi_{\text{name}}(\sigma_{\text{id}}(\sigma_{\text{t_id}}(\sigma_{s1.r_id=s2.r_id \wedge s1.t_id=s2.t_id \wedge s1.s_id \neq s2.s_id} \text{ song}) \bowtie \text{technician}) \bowtie \text{people})$

שאלתה 13+15

לא הצלחתי לעשות !