

KITAP (KitapID, Baslik, Yaginci, Yil)

OGRENCI (OgrID, OgrAdi, Bolun, Yas)

YAZAR (YAdi, Adres)

ODUNC (KitapID, OgrID, Tarih)

YAZILMIS (KitapID, YAdi)

ACIKLAMA (KitapID, Anahitar)

1 \rightarrow $\Pi_{\text{Baslik, Yil}}(\text{KITAP})$

2 \rightarrow $\Pi_{\text{OgrID, OgrAdi, Yas}}(\sigma_{\text{Bolun} = 115}(\text{OGRENCI}))$

3 \rightarrow $\Pi_{\text{OgrID, OgrAdi, Bolun, Yas}}(\text{OGRENCI}) \times \Pi_{\text{KitapID, OgrID, Tarih}}(\text{ODUNC})$

4 \rightarrow $\Pi_{\text{KitapID, Baslik, Yil}}(\sigma_{\text{Yaginci} = "SAÜ" \wedge \text{Yil} < 1990}(\text{KITAP}))$

5 \rightarrow $\Pi_{\text{YAdi}}(\sigma_{\text{Adres} = "Sakarya"}(\text{YAZAR}))$

6 \rightarrow $\Pi_{\text{OgrAdi}}(\sigma_{\text{Yas} > 30 \wedge \text{Bolun} \neq 115}(\text{OGRENCI}))$

7 \rightarrow

8 \rightarrow $\Pi_{\text{OgrAdi, OgrID}}(\text{ODUNC} \bowtie \text{OGRENCI}(\sigma_{\text{Bolun} = "115"}))$

9 \rightarrow $\Pi_{\text{Baslik}}(\text{KITAP} \times \text{YAZAR}(\sigma_{\text{YAdi} = "Ali"}))$

10 \rightarrow $\Pi_{\text{Baslik}}(\text{YAZILMIS} \bowtie \text{KITAP}(\sigma_{\text{YAdi} = "Ali"})) - \sigma_{\text{Anahitar} = "Kitabani"}(\text{ACIKLAMA})$

11 \rightarrow $\text{KITAP} \bowtie \text{ACIKLAMA} \rightarrow$ Bunda "InnerJoin" kullanılacak. Yani Sol sorgu

12 \rightarrow $\text{OGRENCI} \bowtie \text{ODUNC} \bowtie \text{KITAP}$

13 \rightarrow $\Pi_{\text{Baslik}}(\text{YAZILMIS} \bowtie \text{KITAP}(\sigma_{\text{YAdi} = "Yasin"}))$

14 $\rightarrow \Pi_{Yadi} (OGRENCI \bowtie ODUNC \bowtie KITAP \bowtie YAZILMIS (\bar{\sigma}_{OgrAdi = "veli."}))$

15 $\rightarrow \Pi_{Baslik} (\bar{\sigma}_{Anahat = "Veri tabası"}(ACIKLAMA) \cap \bar{\sigma}_{Anahat = "programlama"}(ACIKLAMA))$