

Quiz Solution

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1. List all the computer science books with its antique value.

$\pi_{ISBN, Title, (Cost+(2007-Purchase_Year)*2) \text{ as } Antique_Value}(\sigma_{\text{"Computer Science" in Title}}(book))$

2. List all the computer science and electrical engineering books that were published between 2002 and 2004.

$\sigma_{\text{"Computer Science" in Title}} \wedge Published_Year \geq 2002 \wedge Published_Year \leq 2004 (book) \cup \sigma_{\text{"Electrical Engineering" in Title}} \wedge Published_Year \geq 2002 \wedge Published_Year \leq 2004 (book)$

3. List all publisher names who sells electrical engineering and computer science books at the library.

$\pi_{Publisher_Code, Name}(\sigma_{\text{"Computer Science" in Title}}(book \bowtie publisher) \cap \sigma_{\text{"Electrical Engineering" in Title}}(book \bowtie publisher))$

4. List all the titles that the library purchases from the publisher with Publisher_Code is "PTC".

$\pi_{Title}(\sigma_{Publisher_Code = \text{"PTC"}}(book)) \cup \pi_{Title}(\sigma_{Publisher_Code = \text{"PTC"}}(book))$

5. List the most expensive journal and its publisher name.

$\pi_{Name, Title}(\mathcal{G}_{MAX(Cost)} \text{ as } cost (journal \bowtie publisher) \bowtie (publisher \bowtie journal))$