

Exercise Sheet 2 (DBMS Course)

Problem 1 The database schema consists of four relations

Product(maker, model, type)

PC (model, speed, ram, hd, price)

Laptop(model, speed, ram, hd, screen, price)

Printer(model, color, type, price)

Write Relational algebra expressions for the following queries.

1. Retrieve all PC models that have a speed of at least 3.0.
2. Retrieve all PC models that have a speed of at least 3.0 and at least 500GB hard drive.
3. Retrieve all tuples (maker, model, price) where the manufacturer maker manufactures the product with model number model and at the given price.
4. Retrieve hard-disk sizes that occur in two or more PC s.
5. Retrieve all manufacturers that sell laptops but not PC s.