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ID: SE170041

Class: SE1707

PRODUCT (maker, model, type)

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

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

PRINTER (model, color, type, price)

* Primary key: model
* Foreign key:

1. What PC models have a speed of at least 3.00?

**πmodel(σspeed≥3.00 (PC))**

**πmodel**

**σspeed≥3.00**

**PC**

1. Which manufacturers make laptops with a hard disk of at least 100GB?

**πmaker(Product⋈σhd≥100GB (Laptop))**

**πmaker**

**⋈**

**Product σhd≥100GB**

**Laptop**

1. Find the model number and price of all products ( of any type) made by manufacturers B.

π**model,price(**σ**maker=B (Product)⋈((PC)∪(Laptop)∪(Printer))**

**πmodel,price**

**⋈**

**σmaker=B ∪**

**Product PC Laptop Printer**

1. Find the model number of all color laser printers

**πmodel(σcolor=true(Printer)∩ (σtype=laser(Printer))**

**πmodel**

**∩**

**σcolor=true σtype=laser**

**Printer Printer**

1. Find those manufacturers that sell Laptops, but not PC’s.

**πmaker(σtype=Laptop(Product)) \ πmaker(σtype=PC(Product))**

**\**

**πmaker πmaker**

**σtype=Laptop σtype=PC**

**Product Product**