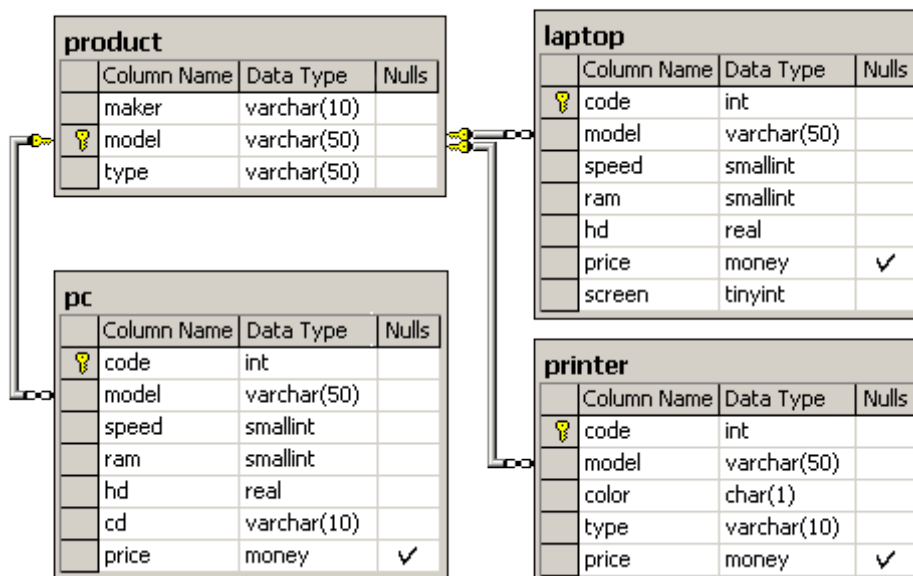# Database "Computer firm"

The schema of the database consists of four tables.

- Product(maker, model, type)
- PC(code, model, speed, ram, hd, cd, price)
- Laptop(code, model, speed, ram, hd, screen, price)
- Printer(code, model, color, type, price)

In the Product table the data on the maker, model number and type of the product (PC, Laptop or Printer) is provided. It is supposed that in this table the model numbers are unique for all the producers and the types of the products. In PC table for each model number, designating PC, there are indicated processor speed (MHz), total volume of RAM (MByte), hard disk storage, hd (in GByte), compact disc drive speed - cd (e.g., '4x'), and the price. Laptop table is analogous to PC table apart from the fact, that instead of the speed of CD-drive the screen size (in inches) is indicated in it. In Printer table for each printer model it is indicated, whether it is a color printer ('y', for the color printer), printer type (Laser, Jet or Matrix), and price.

product

	Column Name	Data Type	Nulls
	maker	varchar(10)	
🔑	model	varchar(50)	
	type	varchar(50)	

laptop

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	speed	smallint	
	ram	smallint	
	hd	real	
	price	money	✓
	screen	tinyint	

pc

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	speed	smallint	
	ram	smallint	
	hd	real	
	cd	varchar(10)	
	price	money	✓

printer

	Column Name	Data Type	Nulls
🔑	code	int	
	model	varchar(50)	
	color	char(1)	
	type	varchar(10)	
	price	money	✓

Queries:

1. Find the model number, speed and hard drive capacity for all the PCs with prices below $500. Result set: model, speed, hd.
2. Find printer makers. Result set: maker.
3. Find the model number, RAM and screen size of the laptops with prices over $1000.
4. Find the model number, speed and hard drive capacity of the PCs having 12x CD and prices less than $600 or having 24x CD and prices less than $600.
5. Point out the maker and speed of the laptops having hard drive capacity more or equal to 10 Gb.
6. Find out the models and prices for all the products (of any type) produced by maker B.
7. Find out the makers that sale PCs but not laptops.
8. Find the printers having the highest price. Result set: model, price.
9. Find out the average speed of PCs.
10. Find all the makers who have all their models of PC type in the PC table
11. Find out the average speed of the PCs produced by maker A.
12. Find the hard drive sizes that are equal among two or more PCs. Result set: hd.
13. Find the pairs of PC models having similar speeds and RAM. As a result, each resulting pair is shown only once, i.e. (i, j) but not (j, i). Result set: model with high number, model with low number, speed, and RAM.
14. Find the laptops having speeds less than all PCs. Result set: type, model, speed.
15. Find the makers of the cheapest color printers. Result set: maker, Price
16. Find the makers producing at least three distinct models of PCs. Result set: maker, number of models.
17. Find the makers producing at least both a pc having speed not less than 750 MHz and a laptop having speed not less than 750 MHz. Result set: Maker
18. Find the model number of the product (PC, laptop, or printer) with the highest price.Result set: model
19. Find the printer makers which also produce PCs with the lowest RAM and the highest-speed processor among PCs with the lowest RAM. Result set: maker.
20. Define the average price of the PCs and laptops produced by maker A.Result set: single total price.
21. Define the average size of the PC hard drive for each maker that also produces printers.Result set: maker, average capacity of HD.