# UFPE – CENTRO DE INFORMÁTICA
## ESTRUTURAS DE DADOS ORIENTADAS A OBJETOS
## ATIVIDADE PRÁTICA
(Gustavo Carvalho – ghpc@cin.ufpe.br)

**Exercise 1**

An automatic checkout system for a supermarket chain needs to be completed. This exercise depends on Exercise 1 from AP7.

- Declare the virtual methods scanner() and printer() in the base class Product. Also define a virtual destructor.
- Write the record() function, which registers and lists products purchased in the store in a program loop. The function creates an array of 100 pointers to the base class, Product. The checkout assistant is prompted to state whether a prepacked or fresh food item is to be scanned next. Memory for each product scanned is allocated dynamically and referenced by the next pointer in the array. After scanning all the available items, a sequential list is displayed. The prices of all the items are added and the total is output at the end.
- Now create an application program to simulate a supermarket checkout. The checkout assistant is prompted in a loop to state whether to define a new customer. If so, the record() function is called; if not, the program terminates.