HOMEWORK 4

- Schemas:
  - Product(#prod, pname, price)
  - Depot(#dep, addr, volume)
  - Stock(#prod, #dep, quantity)

- Instances:

  Product

  \[
  \begin{array}{|c|c|c|}
  \hline
  \#prod & pname & price \\
  \hline
  p1 & tape & 2.5 \\
  p2 & tv & 250 \\
  p3 & vcr & 80 \\
  \hline
  \end{array}
  \]

  Depot

  \[
  \begin{array}{|c|c|c|}
  \hline
  \#dep & addr & volume \\
  \hline
  d1 & New York & 9000 \\
  d2 & Syracuse & 6000 \\
  d4 & New York & 2000 \\
  \hline
  \end{array}
  \]

  Stock

  \[
  \begin{array}{|c|c|c|}
  \hline
  \#prod & \#dep & quantity \\
  \hline
  p1 & d1 & 1000 \\
  p2 & d4 & 1500 \\
  p3 & d1 & 400 \\
  \hline
  \end{array}
  \]

- 1. Write the SQL expressions for the creation of the tables Product, Depot and Stock (you must have at least one CHECK and at least one FOREIGN KEY).

- 2. Write the SQL expressions for the creation of the instances of the tables Product, Depot and Stock.

- 3. Write the following queries in SQL.
  (a) Name and price of the products.
  (b) Name of the products of the d2 depot
  (c) Numbers of the depots that have products out of stock.
  (d) Numbers and addresses of the depots that have products out of stock.
  (e) Addresses of depots that stock all the products.
  (f) Numbers and addresses of depots that stock all the products.