MATLAB EXERCISE 1.33 **Symbolic divergence in Cartesian coordinates.** Using the symbolic programming option in MATLAB, write a function `divCar()` that takes as input symbolic expressions for `fx`, `fy`, and `fz` representing the x-, y-, and z-components, respectively, of a vector function in the Cartesian coordinate system and returns the expression for the divergence of the function. *(divCar.m on IR)*

SOLUTION:

```
%
%   Book: MATLAB-Based Electromagnetics (Pearson Prentice Hall)
%   Author: Branislav M. Notaros
%   Instructor Resources
%   (c) 2011
%
%   This MATLAB code or any part of it may be used only for
%   educational purposes associated with the book
%
%
%


%   Symbolic divergence in Cartesian coordinates


function F = divCar(fx,fy,fz)
syms x y z
F= diff(fx,x)+ diff(fy,y)+ diff(fz,z);
```