Assignment 2

Out: Friday, 19 September 2003
Due: Monday, 29 September 2003

Total: 130 points

Exercise 1 (20 pts) Exercise 5.2.1 on page 59 in the textbook.

Exercise 2 (20 pts) Exercise 5.2.4 on page 61 in the textbook.

Exercise 3 (20 pts) Exercise 5.2.7 on page 63 in the textbook.

Exercise 4 (20 pts) Exercise 5.3.3 on page 69 in the textbook.

Exercise 5 (50 pts) Let us use the following datatype term0 for representing untyped pure λ-calculus.

datatype term0 =
    TmVar0 of string | TmLam0 of string * term0 | TmApp0 of term0 * term0

Please implement a function evaluate that evaluates closed λ-expressions through the call-by-value strategy. Note that evaluate should have the type term0 -> term0.