**Name:**                                                                                   **Id#**

## COE 405, Term 062

## Design & Modeling of Digital Systems

## Quiz# 3

Date: Saturday, April 21, 2007

**Q.1.**

**(i)** Your are required to model the function "-" to compute the 2's complement of a Bit_Vector operand. You are required to model the function without the use of addition and subtraction operation on any type. The function should be modeled to be general enough to handle inputs specified using any range format i.e. To or Downto format. Define the function inside a package and use the package whenever the function needs to be used.

**(ii)** Model an entity ABSV to return the absolute value of a Bit_Vector type using this function. Assume that the input represented in Bit_Vector is a signed number in 2's complement format. The entity should be parametrizable with a generic parameter N. You are free to use any modeling style for the architecture.