**CSCI 360 STM and LM Instructions  
  
RS Instructions**

Instructions that require three operands: 2 registers and a D(B) address

**Store Multiple**

* Format: label STM R1,R2,D(B)
* stores all registers from R1 through R2 in contiguous fullwords starting at D(B)
* if R2 is less than R1, then R1 through register 15 and register 0 through R2 are stored

STM   R4,R7,SAVE => stores registers 4, 5, 6, and 7 in 4 fullwords  
 starting at SAVE

STM   R14,R2,SAVE2 => stores registers 14, 15, 0, 1, and 2 in 5   
 fullwords starting at SAVE2  
 **Load Multiple**

* Format: label LM R1,R2,D(B)
* loads all registers from R1 through R2 from contiguous fullwords starting at D(B)
* if R2 is less than R1, then R1 through register 15 and register 0 through R2 are loaded

LM   R4,R7,SAVE => loads registers 4, 5, 6, and 7 from 4 fullwords   
 starting at SAVE

LM   R14,R2,SAVE2 => loads registers 14, 15, 0, 1, and 2 from 5   
 fullwords starting at SAVE2