**CSCI 360 Conditional No Operation**

Conditional No Operation, or CNOP, is used to align any instruction or storage area on a specific boundary.

Format: CNOP byte,word

* **byte** is an absolute expression that specifies at which even numbered byte in a fullword or doubleword the location counter is set to.  
  + fullword: the value of the expression must be 0 or 2.
  + doubleword: the value of the expression must be 0, 2, 4, or 6.
* **word** is an absolute expression that specifies whether **byte** is a fullword or a doubleword.  
  + fullword: the value of the expression must be 4.
  + doubleword: the value of the expression must be 8.
* Valid CNOP values: (also on page 19 of your yellow card).

byte,word alignment

CNOP 0,4 beginning of a fullword

CNOP 2,4 middle of a fullword

CNOP 0,8 beginning of a doubleword

CNOP 2,8 second halfword of a doubleword

CNOP 4,8 middle (third halfword) of a doubleword

CNOP 6,8 fourth halfword of a doubleword

* The location counter value is not altered if it is already aligned correctly.
* Alignment is achieved by filling in the skipped bytes with no-operation instructions (BCR 0,0).