Assembly Exam 2 Review

Coverage: Chp. 5: Procedures, Chp. 6: Conditionals and Chp. 7: Integer Arithmetic.

1. Chapter 5 - Procedures
   1. Linking to an External Library
   2. Calling library functions
      1. Usage of standard library functions (HW)
         1. DumpRegs, CRLF
         2. WriteHex, WriteDec
   3. Stack Operations (Push/pop)
      1. What is a push/pop
      2. When to push/pop a register inside procedures
      3. When not to push a register
   4. Call/return
   5. Local/Global labels
   6. Uses Operator
   7. Passing parameters
2. Chapter 6 – Conditional Processing
   1. PF, AC
   2. AND/OR/XOR/NOT
      1. Uses of Boolean operations
   3. Bit-mapped set operations
      1. Intersection
      2. Union
   4. TEST/CMP
      1. Way they affect flags
   5. Conditional Jumps
      1. JCC
      2. Unsigned and signed differences
   6. Bit Test
   7. Conditional Loops
      1. Loopz/Loopnz
      2. Expressions -> Programs
   8. Table Driven Selection
   9. String Encryption
3. Chapter 7 –
   1. Shift and Rotate
      1. Difference between arithmetic and logical shift
      2. SHL/SHR – with or without carry
         1. Logical or arithmetic
      3. SAL/SAR
      4. ROL,ROR, RCR, RCL
      5. SHLD/SHRD
      6. STC, CLC
   2. APP
      1. Fast multiply, fast divide (binary)
      2. Fast moving graphic images (shifting multiple double words)
      3. Masking – Isolating bit string
   3. Multiplication and Division
      1. MUL/IMUL (signed/unsigned)
      2. DIV/IDIV
      3. CBW/CWD/DWQ – extensions for instructions
      4. Interpretation of the Carry/Overflow Flag
      5. When an overflow occurs
      6. How to handle divide by zero
         1. Interrupt and overflow – INTO
   4. Arithmetic Expressions
      1. Carry/Overflow flag
   5. Extended precision
      1. ADC
      2. SBB
   6. ASCII
      1. What is ASCII decimal
      2. AAA/AAS
   7. BCD
      1. What are packed and unpacked BCD
      2. Unpacked BCD ops—AAM, AAD
      3. Packed BCD ops--DAA/DAS
   8. Loops and Procedures
      1. JA/JG
      2. JB/JL
      3. Small procedures

Excluded: Repeat, .while,.If, and .else directives