Brandon Hurler Assembly questions 3 8/29/14

1. The three primary modes of operation are:
   1. FOUND ON PAGE 36 (15 on Kindle)
   2. Protected mode
      1. It is the native state of the processor, in which all instructions and features are available. Programs are given separate memory areas called segments, and the processor prevents programs from referencing memory outside their assigned segments.
   3. Virtual-8086 Mode
   4. Real Address Mode
   5. System Management Mode
2. EAX, EBX, ECX, EDX, EBP, ESP, ESI, EDI
   1. EAX – Multiplication and Division
   2. ECX – loop counter
   3. ESP – addresses data on the stack
   4. ESI and EDI – high-speed memory transfer instructions
   5. EBP – used by high level languages to reference function parameters. (Extended frame pointer)
3. CS, SS, DS, ES, FS, GS
4. NA
5. NA
6. The carry flag, the overflow flag, the sign flag, the zero flag, the auxiliary carry flag, the parity flag.
7. NA
8. NA
9. NA
10. NA
11. NA
12. The first member of the IA-32 processor family is the Intel 80386 proce3ssor (1985); it introduced 32-bit data registers and 32-bit address bus and external data path.