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WEEK 1 ASSIGN 3

**2.8**

#1 – in 32-bit mode, aside from ESP, what other register points to variables on the stack?

EBP – extended frame pointer

#2 – name at least 4 CPU status flags

Carry flag – set when the result of unsigned arithmetic op is too large for destination  
 overflow flag – set when result of signed arithmetic op is too large or small for destination  
 sign flag – set when result of arithmetic or logical op generates a negative result  
 zero flag – set when result of arithmetic or logical op generates a result of zero  
 auxiliary carry flag – set when an arithmetic op causes a carry from bit 3 to 4 in an 8-bit operand  
 parity flag – set if the least-sig byte in result contains even number of 1 bits

#3 – which flag is set when the result of an unsigned arithmetic op is too large to fit into destination

Carry flag

#4 – which flag is set when the result of a signed arithmetic op is too large or small to fit into destination

Overflow flag

#5 – T/F: when a register operand size is 32 bits and the REX prefix is used, the R8D register is available for programs to use.

True

#6 – which flag is set when an arithmetic or logical op generates a negative result?

Sign flag

#7 – which part of the CPU performs floating point arithmetic?

FPU – floating-point unit

#8 – on a 32-bit processor, how many bits are contained in each floating-point data register?

80 bits