TUTORIAL 7

1. The SHL instruction performs unsigned multiplication when the multiplier is a power of 2. Shifting an unsigned integer n bits to the left multiplies it by 2^n. Proof by providing an example that SHL can be applied for binary multiplication.

2. The SHR instruction performs unsigned division when the divisor is a power of 2. Shifting an unsigned integer n bits to the right divides it by 2^n. Proof by providing an example that SHR can be applied for binary division.

3. The time stamp field of a file directory entry uses bits 0 through 4 for the seconds, bits 5 through 10 for the minutes, and bits 11 through 15 for the hours.
   a) Write instructions that extract the seconds and copy the value to a byte variable named bSecond.
   b) Write instructions that extract the minutes and copy the value to a byte variable named bMinutes.
   c) Write instructions that extract the hours and copy the value to a byte variable named bHours.

7.9.1- Questions 2, 3, 4, 5

7.9.2- Questions 3, 4, 5, 6, 9, 12