MC97 Homework 1

Due February 12, 1996; Max Hailperin

1. [§2.2] Do Exercise 2.5, from page 79 of the textbook.

2. [§2.2] Do Exercise 2.6, from page 79 of the textbook. Your grammar should be *unambiguous*, and should generate the Roman numerals for all the numbers in the range from 1 to 999 without generating any other strings that are not correctly formed Roman numerals from this range. Some solutions will be simpler than others. As a reminder for those of you who haven't read many Roman inscriptions recently, you can form Roman numerals by stringing together numerals for the hundreds, tens, and ones as shown in the following table:

hundreds		tens		ones	
Arabic	Roman	Arabic	Roman	Arabic	Roman
100	C	10	X	1	I
200	CC	20	XX	2	II
300	CCC	30	XXX	3	III
400	CD	40	XL	4	IV
500	D	50	L	5	V
600	DC	60	LX	6	VI
700	DCC	70	LXX	7	VII
800	DCCC	80	LXXX	8	VIII
900	CM	90	XC	9	IX