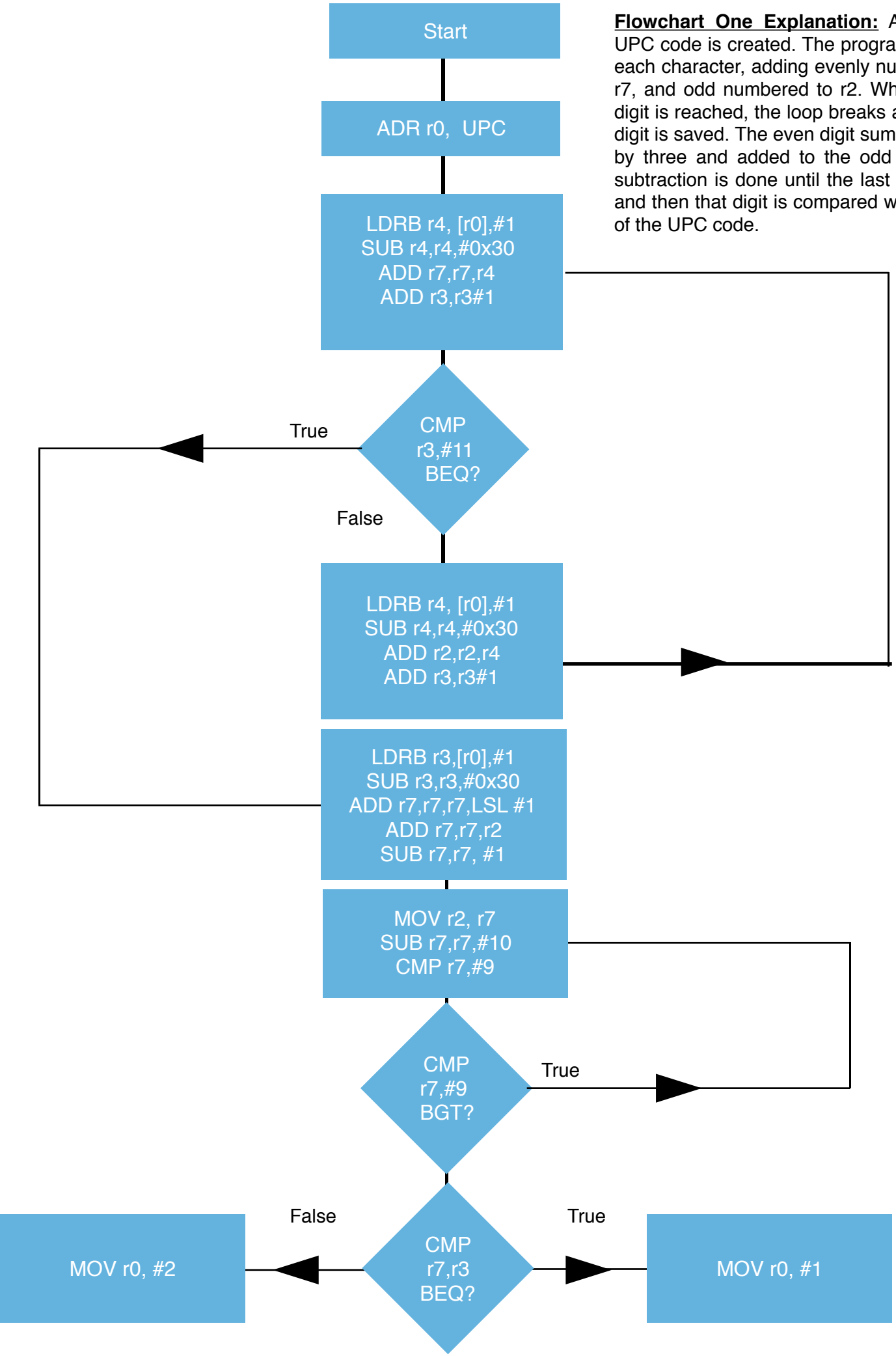
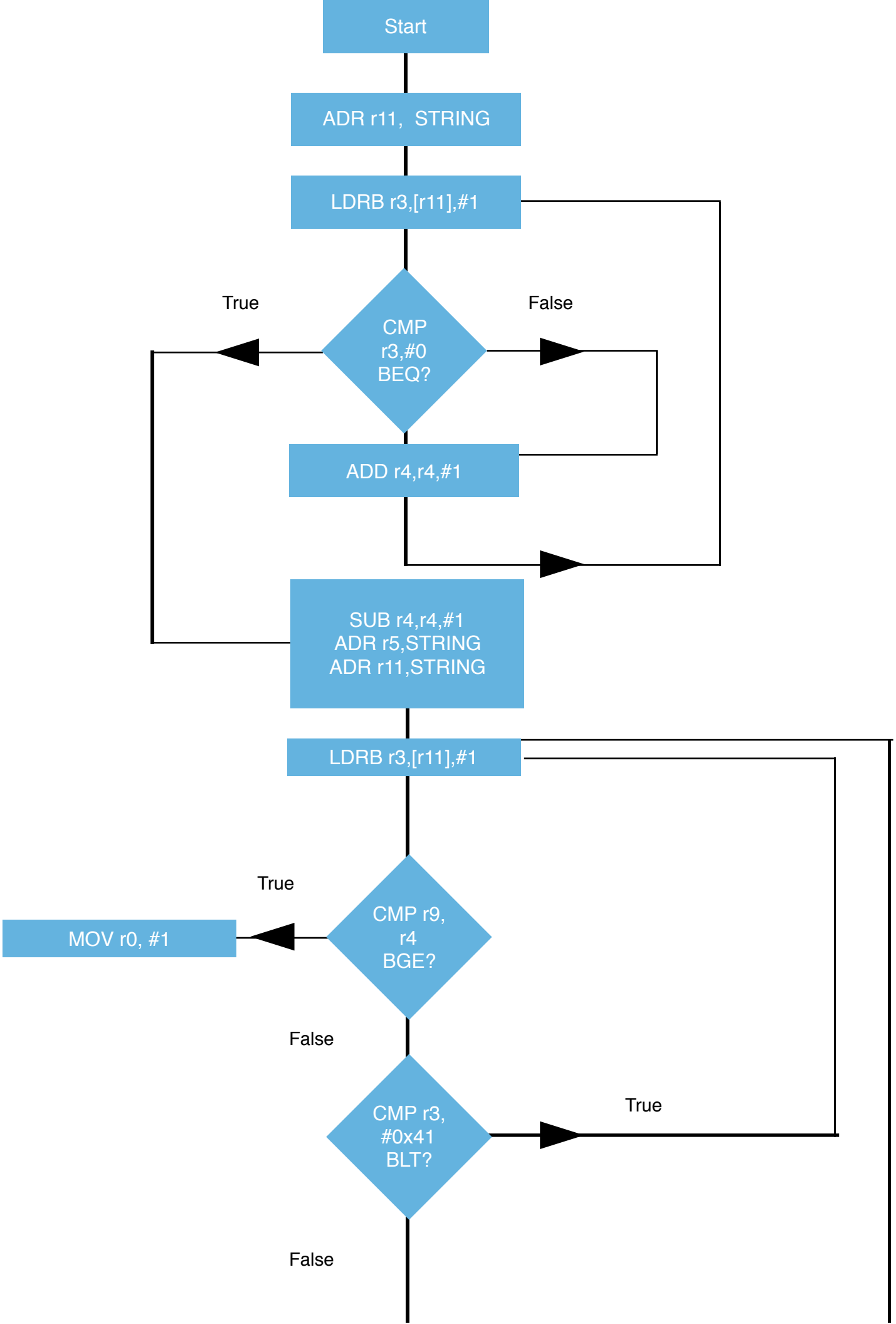
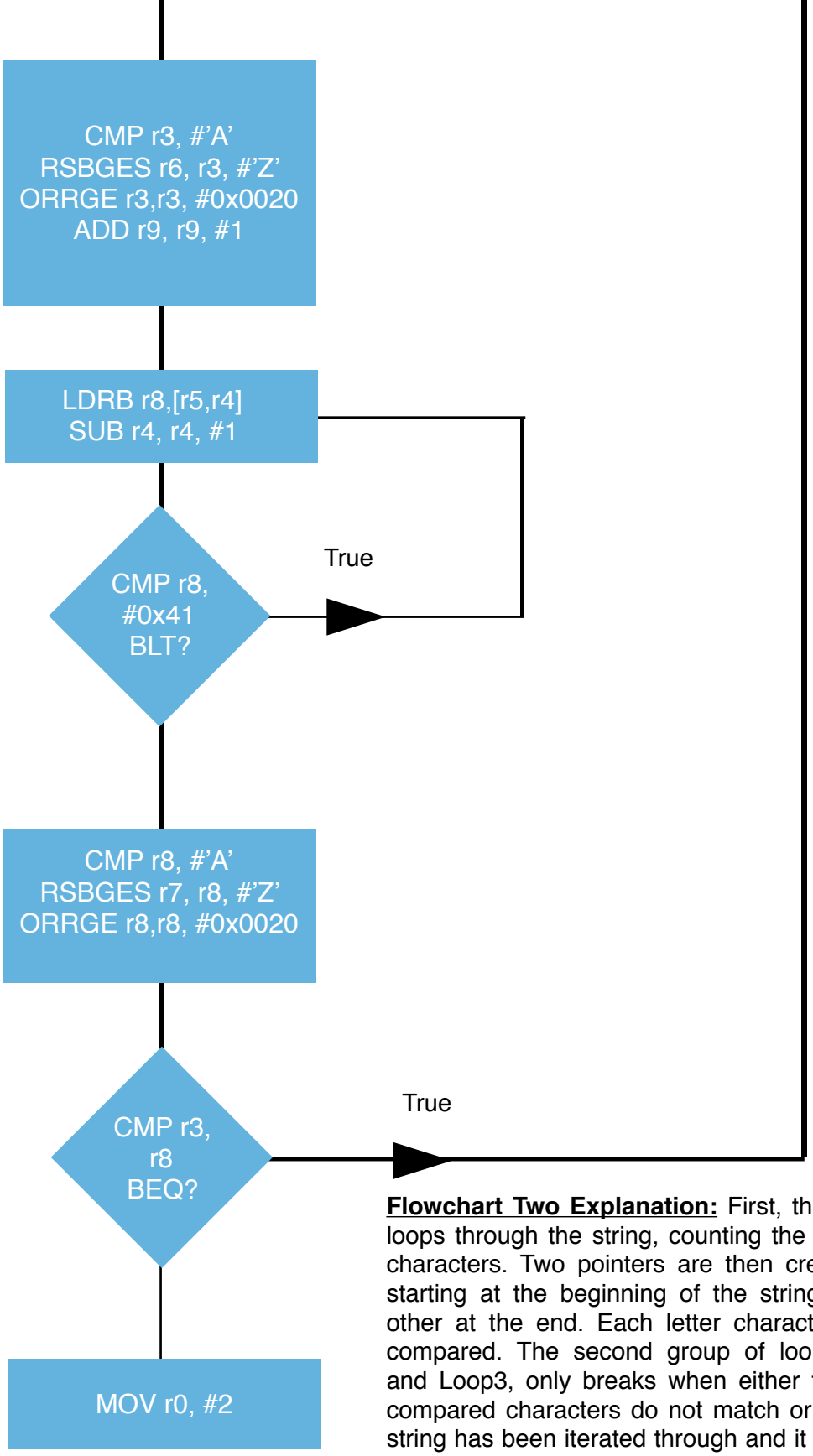


Flowchart One Explanation: A pointer to the UPC code is created. The program loops through each character, adding evenly numbered digits to r7, and odd numbered to r2. When the eleventh digit is reached, the loop breaks and then the last digit is saved. The even digit sum, r7, is multiplied by three and added to the odd sum. Repeated subtraction is done until the last digit is reached, and then that digit is compared with the 12th digit of the UPC code.


Start
ADR r11, STRING
LDRB r3,[r11],#1
True
False
CMP
r3,#0
BEQ?
ADD r4,r4,#1
SUB r4,r4,#1
ADR r5,STRING
ADR r11,STRING
LDRB r3,[r11],#1
True
CMP r9,
r4
BGE?
MOV r0, #1
False
CMP r3,
#0x41
BLT?
True
False



Flowchart Two Explanation: First, the program loops through the string, counting the amount of characters. Two pointers are then created, one starting at the beginning of the string, and the other at the end. Each letter character is then compared. The second group of loops, Loop2 and Loop3, only breaks when either two of the compared characters do not match or the entire string has been iterated through and it is in fact a palindrome.