7.4

|  |  |
| --- | --- |
| TEST | x301F |
| FINISH | x3027 |
| SAVE3 | x3029 |
| SAVE2 | x302A |

7.7

.ORIG x3000

AND R1,R1,#0

LD R2,number

loop1 AND R3,R0,R2

BRz a

ADD R1,R1,#1

a ADD R0,R0,R0

BRz stop

BR loop1

stop TRAP x25

number .FILL x8000

.END

7.9

.END tells the assembler where the program ends. Any characters that come after .END will not be used by the assembler. It differs from HALT in these aspects:

1. It is not an instruction and it will not exist at the time of execution.
2. It does not stop the program.
3. It is just a delimiter to marks the end of the source program.

7.16

This program counts the number of odd numbers and which of the even numbers. The number of odd numbers is stored in R4,and which of the even numbers is stored in R3,

7.18

(a)LDR R3,R1,#0

(b)NOT R4,R4

(c)ADD R4,R4,#1