```
1  @ Average Temperature Program
2  @ This program will take 16 8-bit temperature values and store the average
3  @ Uses R0-R1, R4-R6
4  @ Ryan Nand November 2019
5
6  .text
7  .global _start
8  _start:
9  .equ NUM, 16
10
11     LDR R0, =Celsius_Temp
12     LDR R6, =Celsius_Av
13     MOV R1, #NUM
14 NEXT:
15     LDRB R4, [R0], #1
16     ADD R5, R5, R4
17     SUBS R1, #1
18     BNE NEXT
19     LSR R5, #4
20 STRB R5, [R6]
21 NOP
22
23 .data
24 Celsius_Temp:    .byte 0x8, 0xF, 0x4, 0x3, 0x4, 0x5, 0x6, 0x7, 0x8, 0x9, 0xA, 0xB, 0xC, 0xD, 0xE, 0xF
25 Celsius_Av:      .byte 0x0
26
27 .end
28
```