CS1520 Practical 5 - solutions

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```
.global main
main:
@ Read one line of input from the terminal
mov r0, #0       @ 0 = std input (terminal)
ldr r1, =input @ where to store the input
mov r2, #100     @ max num of bytes to read
mov r7, #3       @ 3 = "read" system call
svc #0           @ make the system call

@ Now compute the number from the string of
@ digits − just like practical 4
mov r10, #10
mov r4, #0
loop:
ldrb r5, [r1], #1
cmp r5, #10
beq finish
sub r5, #48
mul r4, r10
add r4, r5
b loop

finish:
cmp r4, #100
ldrlt r1, =small  @ if num<100, it is "small"
ldrge r1, =large  @ if num>=100, it is "large"
```

```
@ write the result message to terminal
mov r0, #1       @ 1 = std output (terminal)
mov r2, #13      @ number of bytes in the message
mov r7, #4       @ 4 = "write" system call
svc #0           @ make the system call

mov r7, #1       @ 1 = "exit" system call
svc #0           @ make system call

.data
large: .asciz "large number\n"
small: .asciz "small number\n"
input: .space 100  @ reserve 100 bytes of space,
                   @   initialised to 0
```