

```
//
// Ezekiel Kim
// Lab 14
// Program to drive Factorial
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//

.global _start // Provide program starting address

.data
    dbN:      .quad    5
    szN:      .skip    21
    dbRes:    .quad    0
    szRes:    .skip    21
    szMsg1:   .asciz   "Factorial of "
    szMsg2:   .asciz   " is "
    chCr:     .byte    10

.text

_start:
    ldr      x0,      =dbN      // Get dbN
    ldr      x0,      [x0]      // Load dbN
    ldr      x1,      =szN      // Load szN
    bl       int64asc          // Turn into string
    ldr      x0,      =dbN      // Get dbN
    ldr      x0,      [x0]      // Dereference
    bl       fact             // Run factorial
    ldr      x1,      =dbRes     // Get dbRes
    str      x0,      [x1]      // Load result into dbRes
    ldr      x1,      =szRes     // Load string result
    bl       int64asc          // Store value in string
    ldr      x0,      =szMsg1    // Load szMsg1
    bl       putstring         // Print it
    ldr      x0,      =szN       // Load szN
    bl       putstring         // Print it
    ldr      x0,      =szMsg2    // Load szMsg2
    bl       putstring         // Print it
    ldr      x0,      =szRes     // Print result
    bl       putstring         // Print result
    ldr      x0,      =chCr      // Get carriage return
    bl       putch             // Print it
// Setup the parameters to exit the program and then call Linux to do it.
    mov      x0,      #0        // Sets return code to 0
    mov      x8,      #93       // Service command code 93 terminates
    svc      0                // Call linux to terminate the program
.end
```