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; Hello world program
; Eliav Gnessin, Fall 2002
; =====
; This is an example program in 8086 Assembly
; =====

TITLE HELLO

; This instruction defines the memory model that MASM or TASM use
.model small

; Define the stack size. This instruction initializes the SP.
.stack 160h

; Variables & other definitions section
.data
infor      db "Hello world!",10,12+1  ; infor is the string to be printed
inforlen   equ 14                    ; this is the string's length

; This is the program itself
.code
start:     mov ax,@data               ; Since the .data instruction doesn't initialize
the ds register
           mov ds,ax                 ; we have to do it manually

           mov cx,inforlen           ; This is the string's length for our loop
           mov si,0                  ; This will be the index of the string pointer
again:     mov al,infor[si]           ; Get char from loop
           call printch              ; Print it
           inc si                    ; Increment our index
           loop again                ; Do it for all the chars in the string

           mov ax,4c00h              ; This is the program terminator
           int 21h                   ; just like putting "return 0" in C

; =====
; Procedure definitions
; =====

; =====
; Procedure name: printch - Print a char to console
; Input:          AL - the char's ASCII code
; Output:         None
; =====
printch proc near
           mov bx,0                   ; No color definitions
           mov ah,0Eh                 ; Print char to TTY function code
           int 10h                    ; Call
           ret
printch endp

; End of program
end start

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