

# Simple Application: Keyboard Handling, Text Printing

**Author:** InternetNightmare

One day on IRC I was asked to make little program that read keypress from 1 to 9 and outputs the same number of text lines. It was for the university! So I decided to make tutorial for that. And here it goes! :)

Interrupt 16h is used for keyboard handling, function 0 (AH=0) waits for keypress and returns it's scancode in AH and ASCII value in AL. In this tutorial I'll show you the way to get numbers from ASCII values.

Here's the code:

---

```
[global start]
org 100h
```

```
start:
```

```
xor ax, ax
```

```
int 16h ; wait for keypress
```

```
cmp al, 0x30 ; check if keypress is a number 0x31-0x39 ar numbers from 1 to 9
```

```
jbe p_error ; jump to error if number is below or equal to 0x30
```

```
cmp al, 0x39
```

```
ja p_error ; jump to error if number is above 0x39
```

```
xor cx, cx ; zero off cx
```

```
mov cl, al ; load correct keyboard scancode to cx
```

```
sub cx, 0x30 ; subtract 0x30 from cx, to get actual number
```

```
mov ah, 9 ; DOS (int 21h) printing function
```

```
mov dx,txt_text ; load pointer to the text to print
```

```
print:
```

```
int 21h
```

```
loopnz print ; loops while cx is not equal to 0, after each loop decreases cx by 1, so int 21h is called cx times.
```

```
mov ah, 0x4c ; exit
```

```
int 21h
```

```
p_error: ; prints error
```

```
mov dx,txt_error
```

```
mov ah, 9
```

```
int 21h
```

```
mov ah, 0x4c  
int 21h
```

```
txt_text db "Our super duper cool text here :) $"  
txt_error db "Wrong key pressed! $"
```

---

I hope you enjoyed a simple tutorial and learned something. If you have any suggestions for tutorials e-mail me to [InternetNightmare\\_X@yahoo.com](mailto:InternetNightmare_X@yahoo.com)