Keyboard Input And Arithmetic

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read

To get input from the keyboard, you use the [**read**](http://linuxcommand.org/lc3_man_pages/readh.html) command. The **read** command takes input from the keyboard and assigns it to a variable. Here is an example:

#!/bin/bash

**echo** -n "Enter some text > "

**read** text

**echo** "You entered: $text"

As you can see, we displayed a prompt on line 3. Note that "-n" given to the **echo** command causes it to keep the cursor on the same line; i.e., it does not output a linefeed at the end of the prompt.

Next, we invoke the **read** command with "text" as its argument. What this does is wait for the user to type something followed by a carriage return (the Enter key) and then assign whatever was typed to the variable text.

Here is the script in action:

[me@linuxbox me]$ **read\_demo.bash**  
Enter some text > **this is some text**  
You entered: this is some text

Arithmetic

[me@linuxbox me]$ **echo $((2+2))**

As you can see, when you surround an arithmetic expression with the double parentheses, the shell will perform arithmetic expansion.

Notice that whitespace is ignored:

[me@linuxbox me]$ **echo $((2+2))**  
4  
[me@linuxbox me]$ **echo $(( 2+2 ))**  
4  
[me@linuxbox me]$ **echo $(( 2 + 2 ))**  
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The shell can perform a variety of common (and not so common) arithmetic operations. Here is an example:

#!/bin/bash

first\_num=0

second\_num=0

**echo** -n "Enter the first number --> "

**read** first\_num

**echo** -n "Enter the second number -> "

**read** second\_num

**echo** "first number + second number = $((first\_num + second\_num))"

**echo** "first number - second number = $((first\_num - second\_num))"

**echo** "first number \* second number = $((first\_num \* second\_num))"

**echo** "first number / second number = $((first\_num / second\_num))"

**echo** "first number % second number = $((first\_num % second\_num))"

**echo** "first number raised to the"

**echo** "power of the second number = $((first\_num \*\* second\_num))"

Example:

#!/bin/bash

number=0

**echo** -n "Enter a number > "

**read** number

**echo** "Number is $number"

**if** **[** $((number % 2)) -eq 0 **];** **then**

**echo** "Number is even"

**else**

**echo** "Number is odd"

**fi**

Example:

#!/bin/bash

seconds=0

**echo** -n "Enter number of seconds > "

**read** seconds

hours=$((seconds / 3600))

seconds=$((seconds % 3600))

minutes=$((seconds / 60))

seconds=$((seconds % 60))

**echo** "$hours hour(s) $minutes minute(s) $seconds second(s)"