

Table Of Contents

Table Of Contents 1

while loop syntax 2

[Home](#) > [Faq](#) > [BASH Shell](#)

Bash While Loop Example

Posted by [Vivek Gite](#) <vivek@nixcraft.com>

Q. How do I use bash while loop to repeat certain task under Linux / UNIX operating system?

A. Bash while loop is a control flow statement that allows code or commands to be executed repeatedly based on a given condition. For example, run echo command 5 times or read text file line by line or evaluate the options passed on the command line for a script.



[1]

while loop syntax

```
while [ condition ]
do
    command1
    command2
    command3
done
```

command1 to command3 will be executed repeatedly till condition is true. The argument for a while loop can be any boolean expression. Infinite loops occur when the conditional never evaluates to false. For example following while loop will print welcome 5 times on screen:

```
#!/bin/bash
x=1
while [ $x -le 5 ]
do
    echo "Welcome $x times"
    x=$(( $x + 1 ))
done
```

Here is a sample shell code to calculate factorial using while loop:

```
#!/bin/bash
counter=$1
factorial=1
while [ $counter -gt 0 ]
do
    factorial=$(( $factorial * $counter ))
    counter=$(( $counter - 1 ))
done
echo $factorial
```

To run just type:

```
$ chmod +x script.sh
$ ./script.sh 5
```

Output:

```
120
```

While loops are frequently used for reading data line by line from file:

```
#!/bin/bash
FILE=$1
# read $FILE using the file descriptors
```

```
exec 3<&0
exec 0<$FILE
while read line
do
    # use $line variable to process line
    echo $line
done
exec 0<&3
```

You can easily evaluate the options passed on the command line for a script using while loop:

```
.....
..
while getopts ae:f:hd:s:qx: option
do
    case "${option}"
    in
        a) ALARM="TRUE";;
        e) ADMIN=${OPTARG};;
        d) DOMAIN=${OPTARG};;
        f) SERVERFILE=${OPTARG};;
        s) WHOIS_SERVER=${OPTARG};;
        q) QUIET="TRUE";;
        x) WARNDAYS=${OPTARG};;
        \?) usage
            exit 1;;
    esac
done
.....
..
```

4000+ howtos and counting! Want to read more Linux / UNIX howtos, tips and tricks? Subscribe to our [daily email](#) newsletter or [weekly newsletter](#) to make sure you don't miss a single tip/tricks. Alternatively, subscribe via [RSS/XML](#) feed.

Article printed from Frequently Asked Questions About Linux / UNIX: <http://www.cyberciti.biz/faq/>

URL to article: <http://www.cyberciti.biz/faq/bash-while-loop/>

URLs in this post:

[1] Image: <http://www.cyberciti.biz/faq/faq/category/bash-shell/>