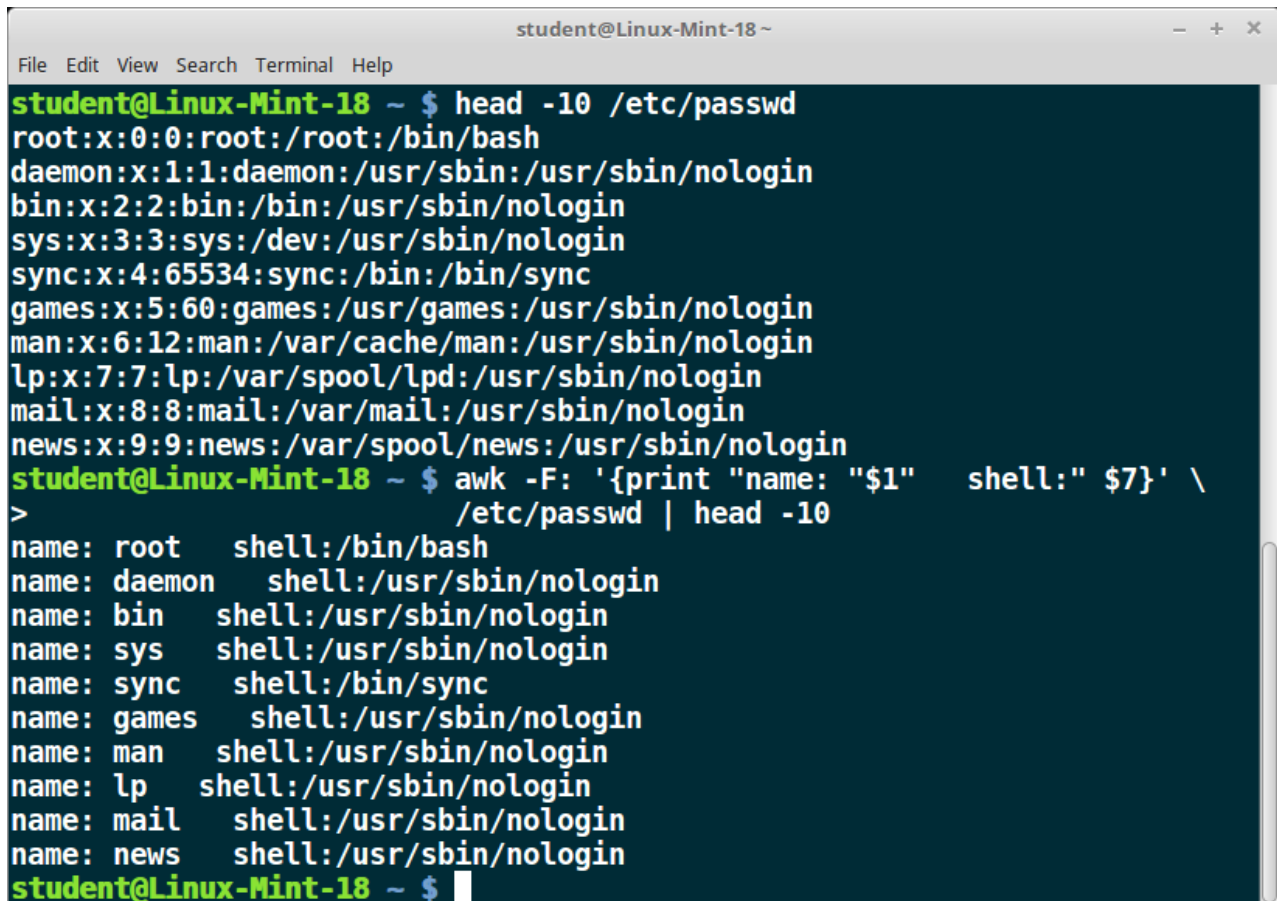


awk Command Syntax and Basic Operations

coursera.org/learn/linux-tools-for-developers/supplement/XyGPe/awk-command-syntax-and-basic-operations

awk is invoked as shown in the following screenshot:



```
student@Linux-Mint-18 ~ $ head -10 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
student@Linux-Mint-18 ~ $ awk -F: '{print "name: \"$1\"    shell: \"$7\"}' \
> /etc/passwd | head -10
name: root    shell:/bin/bash
name: daemon  shell:/usr/sbin/nologin
name: bin     shell:/usr/sbin/nologin
name: sys     shell:/usr/sbin/nologin
name: sync    shell:/bin/sync
name: games   shell:/usr/sbin/nologin
name: man     shell:/usr/sbin/nologin
name: lp      shell:/usr/sbin/nologin
name: mail    shell:/usr/sbin/nologin
name: news    shell:/usr/sbin/nologin
student@Linux-Mint-18 ~ $
```

As with **sed**, short **awk** commands can be specified directly at the command line, but a more complex script can be saved in a file that you can specify using the **-f** option.

Command

<header>

awk 'command' file Specify a command directly at the command line

awk -f scriptfile file Specify a file that contains the script to be executed

The table below explains the basic tasks that can be performed using **awk**. The input file is read one line at a time, and, for each line, **awk** matches the given pattern in the given order and performs the requested action. The **-F** option allows you to specify a particular field separator character. For example, the **/etc/passwd** file uses ":" to separate the fields, so the **-F:** option is used with the **/etc/passwd** file.

The command/action in **awk** needs to be surrounded with apostrophes (or single-quote (')). **awk** can be used as follows:

| Command | Usage |
|--|--|
| awk '{ print \$0 }' /etc/passwd | Print entire file |
| awk -F: '{ print \$1 }' /etc/passwd | Print first field (column) of every line, separated by a space |
| awk -F: '{ print \$1 \$7 }' /etc/passwd | Print first and seventh field of every line |