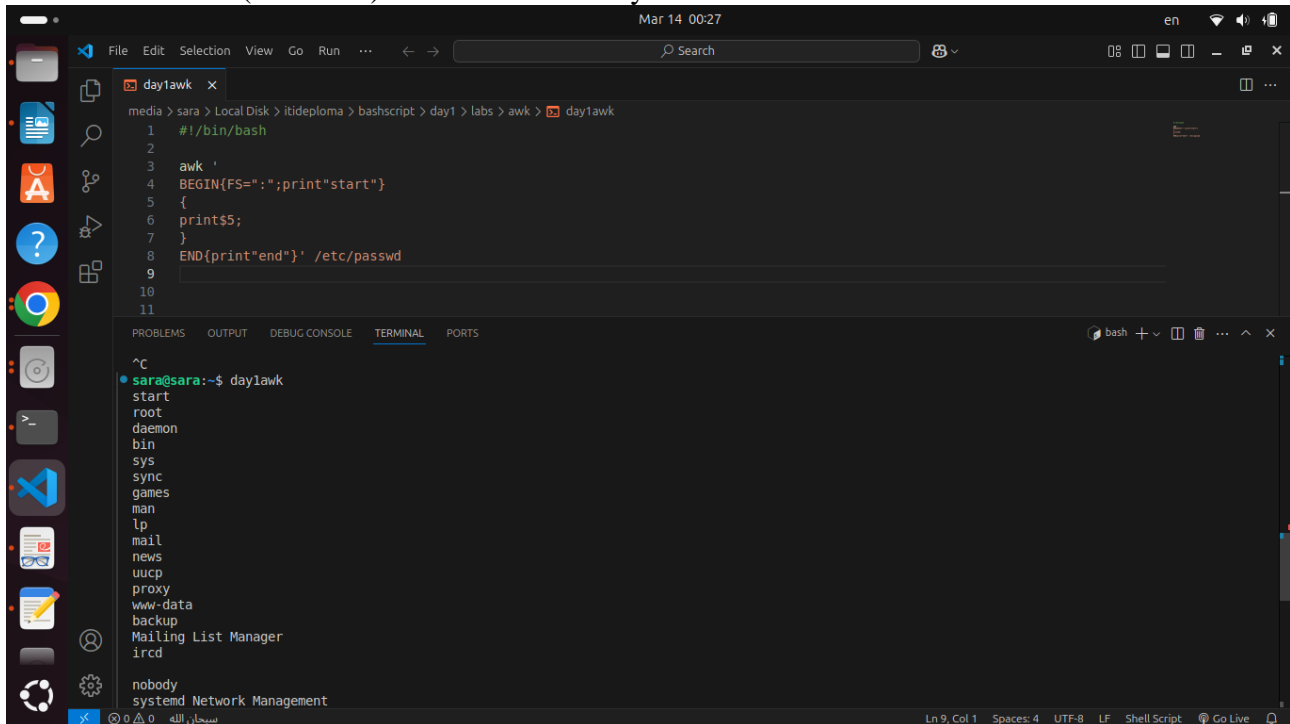


## Using awk utility

1- Print full name (comment) of all users in the system.



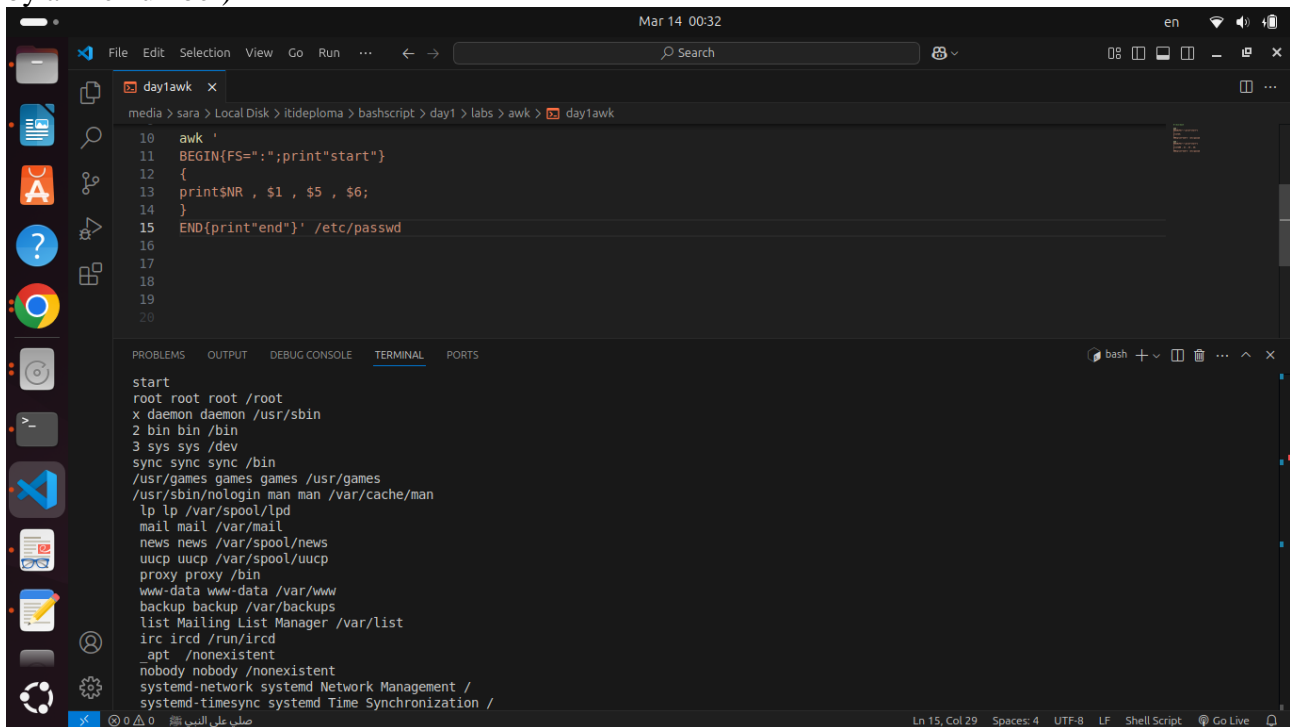
The screenshot shows a VS Code editor window with a file named `day1awk`. The editor contains an awk script that reads the `/etc/passwd` file and prints the full name of each user. The terminal output shows the results of running the script.

```
1 #!/bin/bash
2
3 awk '
4 BEGIN{FS=":";print"start"}
5 {
6 print$5;
7 }
8 END{print"end"}' /etc/passwd
9
10
11
```

Terminal Output:

```
sara@sara:~$ day1awk
start
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
Mailing List Manager
ircd
nobody
systemd Network Management
```

2- Print login, full name (comment) and home directory of all users.( Print each line preceded by a line number)



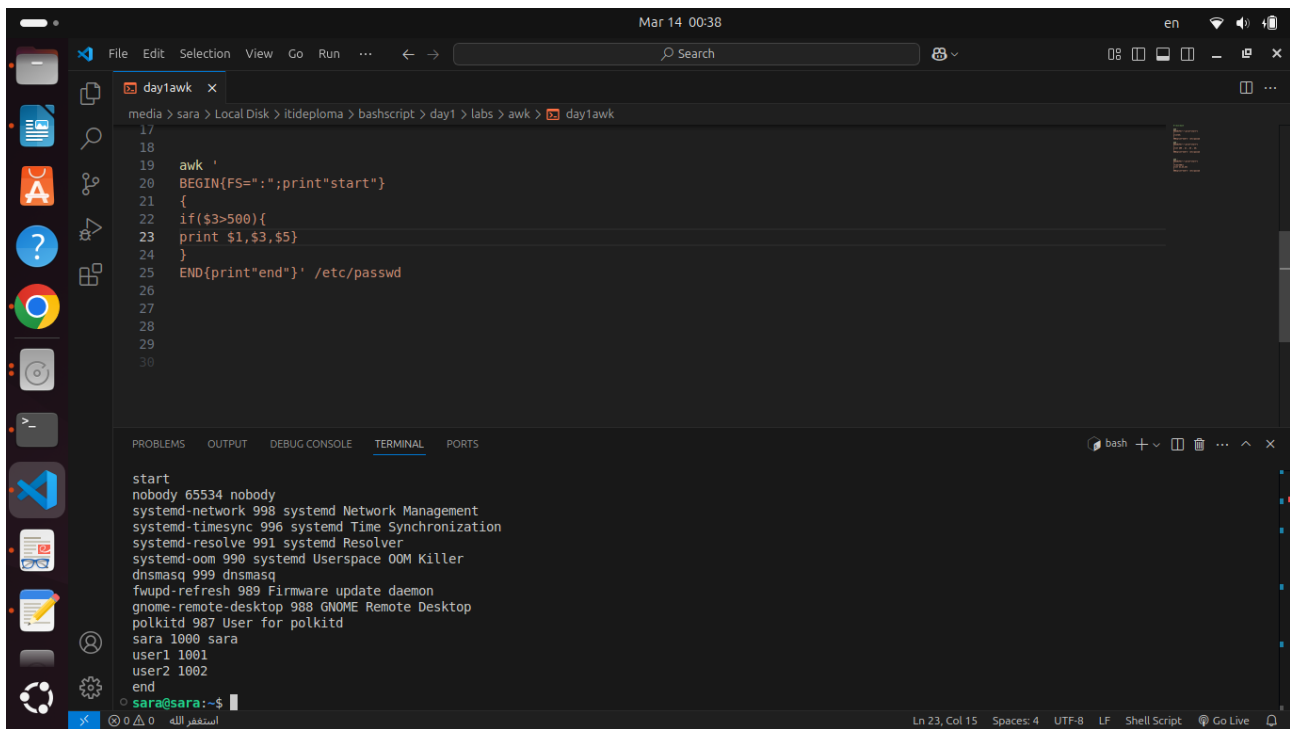
The screenshot shows a VS Code editor window with a file named `day1awk`. The editor contains an awk script that reads the `/etc/passwd` file and prints the login, full name, and home directory of each user, preceded by a line number. The terminal output shows the results of running the script.

```
10 awk '
11 BEGIN{FS=":";print"start"}
12 {
13 print$NR , $1 , $5 , $6;
14 }
15 END{print"end"}' /etc/passwd
16
17
18
19
20
```

Terminal Output:

```
start
root root root /root
x daemon daemon /usr/sbin
2 bin bin /bin
3 sys sys /dev
sync sync sync /bin
/usr/games games games /usr/games
/usr/sbin/nologin man man /var/cache/man
lp lp /var/spool/lpd
mail mail /var/mail
news news /var/spool/news
uucp uucp /var/spool/uucp
proxy proxy /bin
www-data www-data /var/www
backup backup /var/backups
list Mailing List Manager /var/list
irc ircd /run/ircd
_apt /nonexistent
nobody nobody /nonexistent
systemd-network systemd Network Management /
systemd-timesync systemd Time Synchronization /
```

3- Print login, uid and full name (comment) of those uid is greater than 500

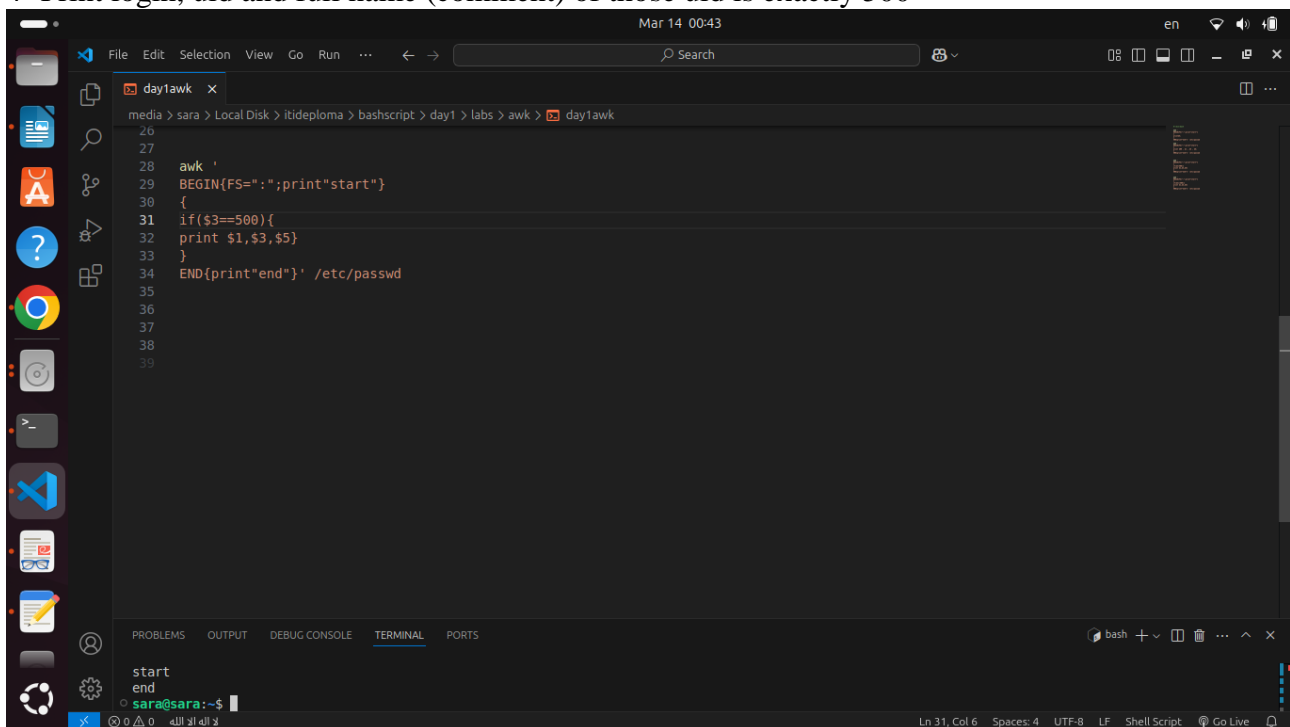


The screenshot shows a VS Code editor window with a file named `day1awk`. The script is an awk program that prints the start of the `/etc/passwd` file. The terminal output shows the first few lines of the file, including system users and regular users.

```
media > sara > Local Disk > itideploma > bashscript > day1 > labs > awk > day1awk
17
18
19 awk '
20 BEGIN{FS=":";print"start"}
21 {
22 if($3>500){
23 print $1,$3,$5}
24 }
25 END{print"end"}' /etc/passwd
26
27
28
29
30
```

```
start
nobody 65534 nobody
systemd-network 998 systemd Network Management
systemd-timesync 996 systemd Time Synchronization
systemd-resolve 991 systemd Resolver
systemd-oom 990 systemd Userspace OOM Killer
dnsmasq 999 dnsmasq
fwupd-refresh 989 Firmware update daemon
gnome-remote-desktop 988 GNOME Remote Desktop
polkitd 987 User for polkitd
sara 1000 sara
user1 1001
user2 1002
end
sara@sara:~$
```

4- Print login, uid and full name (comment) of those uid is exactly 500

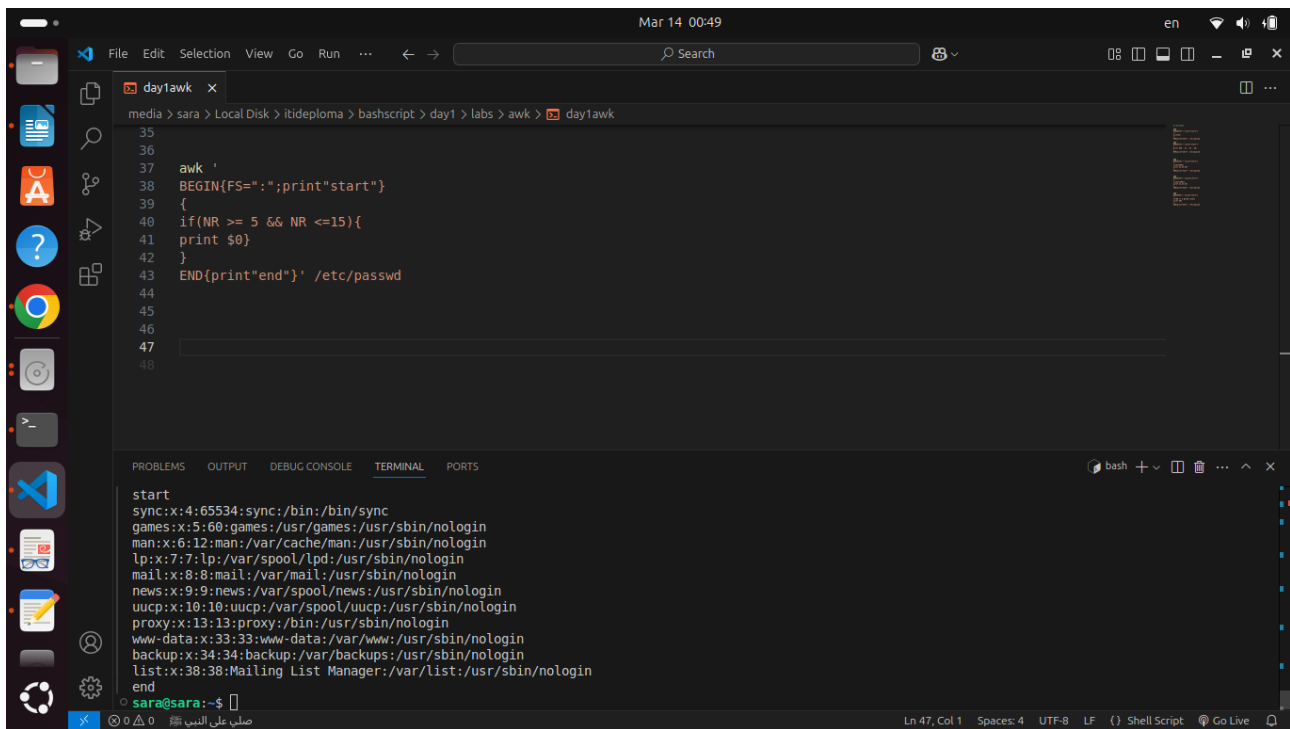


The screenshot shows a VS Code editor window with a file named `day1awk`. The script is an awk program that prints the login, uid, and full name of users with uid 500. The terminal output shows the output of the script.

```
media > sara > Local Disk > itideploma > bashscript > day1 > labs > awk > day1awk
26
27
28 awk '
29 BEGIN{FS=":";print"start"}
30 {
31 if($3==500){
32 print $1,$3,$5}
33 }
34 END{print"end"}' /etc/passwd
35
36
37
38
39
```

```
start
end
sara@sara:~$
```

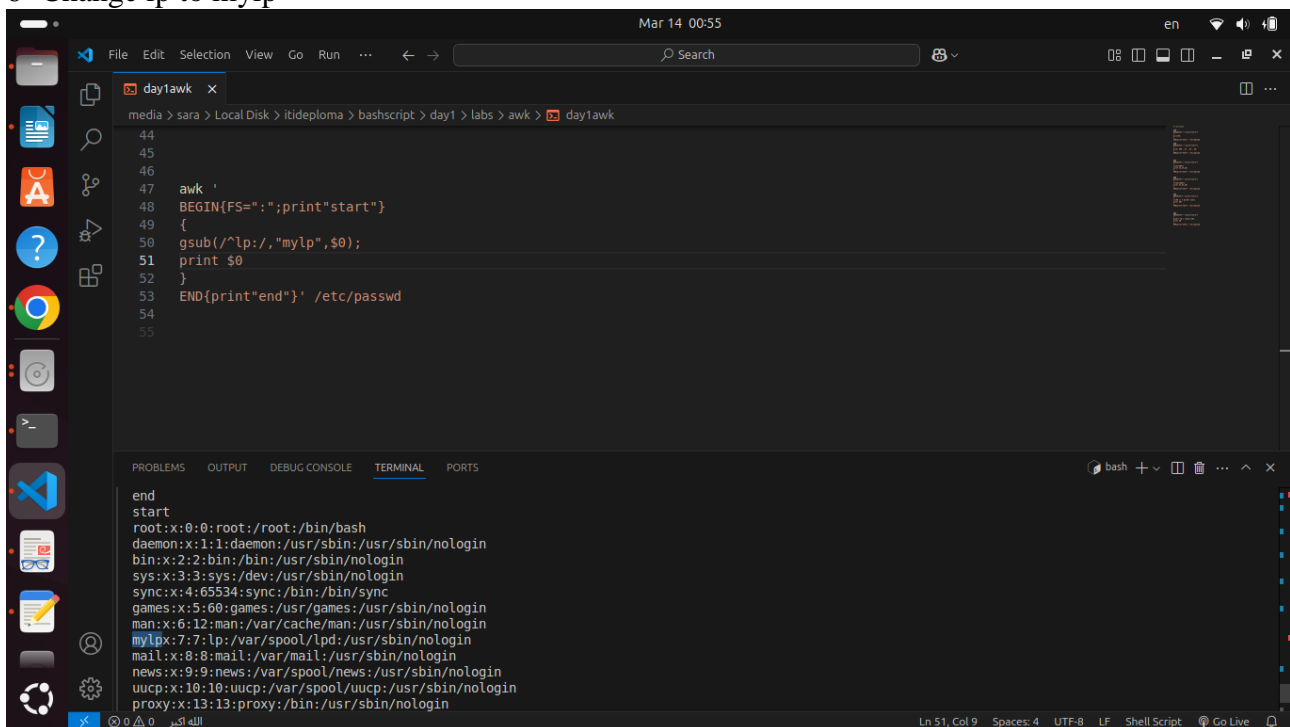
5- Print line from 5 to 15 from `/etc/passwd`



```
35
36
37 awk '
38 BEGIN{FS=":";print"start"}
39 {
40 if(NR >= 5 && NR <=15){
41 print $0}
42 }
43 END{print"end"}' /etc/passwd
44
45
46
47
48
```

```
start
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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
end
sara@sara:~$
```

## 6- Change lp to mylp



```
44
45
46
47 awk '
48 BEGIN{FS=":";print"start"}
49 {
50 gsub(/^\lp:/,"mylp",$0);
51 print $0
52 }
53 END{print"end"}' /etc/passwd
54
55
```

```
end
start
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
mylp: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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
الله اكبر
```

## 7- Print all information about greatest uid.

```
56
57 awk '
58 BEGIN{FS=":";print"start"}
59 {
60 if($3>max){
61 max=$3;
62 maxline=$0;
63 }
64 }
65
66 END{
67 print maxline
68 print"end"}' /etc/passwd
```

start  
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin  
end  
sara@sara:~\$

8- Get the sum of all accounts id's.

```
70
71
72 awk '
73 BEGIN{FS=":";print"start"}
74 {
75 sum+=$3
76 }
77
78
79 END{
80 print sum
81 print"end"}' /etc/passwd
```

start  
79160  
end  
sara@sara:~\$