

Bash IFS

IFS stands for Internal Field Separator. It is an environment variable that defines a field separators. By default, space, tab, and newline are considered as field separators but you can change it in your script as per your need. It is mainly used in for loop to manipulate fields present in the list.

Consider an example in which an array element is having space. Without using IFS see what you will get in the output.

```
cars=(Toyota Honda Renault "Maruti Suzuki")
for car in ${cars[*]}
do
    echo $car
done
```

Output of the above program

```
Toyota
Honda
Renault
Maruti
Suzuki
```

Actually, Maruti and Suzuki must come in one line but it is not coming. So with the help of IFS, you can solve this problem.

```
IFS=$'\n'
cars=(Toyota Honda Renault "Maruti Suzuki")
for car in ${cars[*]}
do
    echo $car
done
```

Output of the above program

```
Toyota
Honda
Renault
Maruti Suzuki
```

Here, we have defined newline as a field separator to get Maruti Suzuki in one line.

Display usernames present in /etc/passwd file

```
#Bash Script to display usernames from /etc/passwd file
IFS=$'\n':
i=1
for user in `cat /etc/passwd`
do
    if [ $i -eq 1 ]
    then
        echo $user
    fi
    if [ $i -eq 7 ]
    then
        i=1
    else
        i=$((i+1))
    fi
done
```

Output of the above program

```
root
daemon
bin
sys
guest
nobody
```

Here, we have defined newline and colon as a field separator.