## **SED command in UNIX**

Stream Editor: a non interactive editor used for filtering out the desired data from the specified file.

It reads input sequentially, applies the operations specified via the command line or a sed script and directs the processed data to the standard output.

The instruction is a combination of two components: *an address* and *a command*.

Address contains the filter condition that is applied on the data stream to extract the desired data.

The address in a syntax refers to the range of data of the file on which we wish to apply the desired action.

Two ways of addressing the lines:

- 1. By line number.
- 2. By specifying a pattern that occures in a line

Command is applied on the desired data for processing.

Syntax: sed options 'address action' file(s)

# options:

- -n suppresses duplicate line printing
- -f Reads instruction from a file
- -e Interpretes the next string as an instruction or a set of instructions.

Create file bank.lst with following data in editor and then run sed command on it.

### **Bank.lst**

```
101
      Aditya 0
                  14/11/2000
                               current
102
      Anil
           10000 20/05/2011
                               saving
103
                  20/08/2009
      Naman0
                               current
      Ram 10000 15/08/2010
104
                               saving
105
      Jyotsna
                  5000 16/06/2012
                                     saving
106
      Mukesh
                  14000 20/12/2009
                                     Current
107
      Vishal 14500 30/11/2011
                               saving
108
      Chirag 0
                 15/12/2012
                               Current
109
      Arya 16000 14/12/2010
                               Current
110
      Priya 130 16/11/2009
                               Saving
```

#### Q. Print first 3 records from bank.lst

root@MUM084:~/Desktop# sed '3q' bank.lst 101 Aditya 0 14/11/2000 current 102 Anil 10000 20/05/2011 saving 103 Naman0 20/08/2009 current

Note: By default sed prints all lines to the standard output.

```
root@MUM084:~/Desktop# sed '3p' bank.lst
      Aditya 0
                    14/11/2000
             10000 20/05/2011
102
      Anil
                                 saving
103
      Naman
                    0
                          20/08/2009
                                        current
                           20/08/2009
103
      Naman
                    0
                                        current
104
      Ram 10000 15/08/2010
                                 saving
105
      Jyotsna
                    5000 16/06/2012
                                        saving
106
      Mukesh
                    14000 20/12/2009
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '1,2p' bank.lst
      Aditya0
                    14/11/2000
                                 current
101
101
      Aditya0
                    14/11/2000
                                 current
102
             10000 20/05/2011
      Anil
                                 saving
102
             10000 20/05/2011
      Anil
                                 saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                 current
104
      Ram 10000 15/08/2010
                                 saving
105
                    5000 16/06/2012
      Jvotsna
                                        saving
106
                    14000 20/12/2009
                                        Current
      Mukesh
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arva 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
```

# Use -n to suppress duplicate line printing.

```
root@MUM084:~/Desktop# sed -n '1,2p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
            10000 20/05/2011
      Anil
                                 saving
root@MUM084:~/Desktop# sed -n '1,4p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
      Anil
             10000 20/05/2011
                                 saving
103
      Naman0
                    20/08/2009
                                 current
104
             10000 15/08/2010
      Ram
                                 saving
root@MUM084:~/Desktop# sed -n '4,7p' bank.lst
104
            10000 15/08/2010
                                 saving
      Ram
105
                    5000 16/06/2012
      Jyotsna
                                       saving
```

```
106 Mukesh 14000 20/12/2009 Current
```

107 Vishal 14500 30/11/2011 saving

```
Note: $ represents the last record in file.
root@MUM084:~/Desktop# sed -n '$p' bank.lst
110
      Priya 130
                    16/11/2009
root@MUM084:~/Desktop# sed -n '1,2p
> $p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
      Anil 10000 20/05/2011
102
                                 saving
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed -n '3,$!p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
             10000 20/05/2011
      Anil
                                 saving
root@MUM084:~/Desktop# sed -n '$!p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
            10000 20/05/2011
102
      Anil
                                 saving
103
      Naman0
                    20/08/2009
                                 current
104
      Ram 10000 15/08/2010
                                 saving
105
                    5000 16/06/2012
                                        saving
      Jyotsna
106
      Mukesh
                    14000 20/12/2009
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
root@MUM084:~/Desktop# sed -n '2,5!p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
106
      Mukesh
                    14000 20/12/2009
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed -n -e '1,2p' -e '7,9p' -e '$p' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
      Anil
            10000 20/05/2011
                                 saving
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# cat > instr.fil
1,2p
```

7,9p

```
root@MUM084:~/Desktop# sed -n -f instr.fil bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
             10000 20/05/2011
102
      Anil
                                  saving
      Vishal 14500 30/11/2011
107
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:~/Desktop# sed -n '/current/p' bank.lst
                    14/11/2000
101
       Aditya 0
                                  current
103
      Naman0
                    20/08/2009
                                  current
root@MUM084:~/Desktop# sed -n '/current/,/saving/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
102
             10000 20/05/2011
      Anil
                                  saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                  current
104
             10000 15/08/2010
      Ram
                                  saving
root@MUM084:~/Desktop# sed -n '1,/current/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
102
      Anil
             10000 20/05/2011
                                  saving
103
      Naman0
                    20/08/2009
                                  current
root@MUM084:~/Desktop# sed -n '3,/current/p' bank.lst
                    20/08/2009
103
      Naman<sub>0</sub>
                                  current
      Ram 10000 15/08/2010
104
                                  saving
105
                    5000 16/06/2012
      Jyotsna
                                         saving
106
      Mukesh
                    14000 20/12/2009
                                         Current
107
      Vishal 14500 30/11/2011
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:~/Desktop# sed -n '3,/Current/p' bank.lst
103
      Naman0
                    20/08/2009
                                  current
104
      Ram 10000 15/08/2010
                                  saving
105
      Jyotsna
                    5000 16/06/2012
                                         saving
106
      Mukesh
                    14000 20/12/2009
                                         Current
root@MUM084:~/Desktop# sed -n '3,/saving/p' bank.lst
103
                    20/08/2009
      Naman<sub>0</sub>
                                  current
104
      Ram 10000 15/08/2010
                                  saving
root@MUM084:~/Desktop# sed -n '/[cC]urrent/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
103
      Naman0
                    20/08/2009
                                  current
106
      Mukesh
                    14000 20/12/2009
                                         Current
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
```

## Writing to other file:

root@MUM084:~/Desktop# sed -n '/[cC]urrent/w clist.lst' bank.lst

```
root@MUM084:~/Desktop# cat clist.lst
101
      Aditya 0
                    14/11/2000
                                 current
103
      Naman0
                    20/08/2009
                                 current
106
      Mukesh
                    14000 20/12/2009
                                       Current
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
```

root@MUM084:~/Desktop# sed -n '1,4w clist.lst' bank.lst

```
root@MUM084:~/Desktop# cat clist.lst
      Aditya 0
101
                   14/11/2000
                                 current
102
      Anil
             10000 20/05/2011
                                 saving
103
      Naman0
                   20/08/2009
                                 current
104
      Ram
            10000 15/08/2010
                                 saving
```

## **Inserting into file**

root@MUM084:~/Desktop# sed '1i 201 Viren 2000 13/05/2012 saving' bank.lst > newbank.lst

```
root@MUM084:~/Desktop# cat newbank.lst
201 Viren 2000 13/05/2012 saving
101
      Aditya 0
                   14/11/2000
                                current
102
            10000 20/05/2011
      Anil
                                saving
103
      Naman0
                   20/08/2009
                                current
104
            10000 15/08/2010
      Ram
                                saving
105
                   5000 16/06/2012
      Jyotsna
                                       saving
106
                   14000 20/12/2009
      Mukesh
                                       Current
107
      Vishal 14500 30/11/2011
                                saving
108
      Chirag 0
                   15/12/2012
                                Current
109
      Arya 16000 14/12/2010
                                Current
      Priya 130
110
                   16/11/2009
                                Saving
root@MUM084:~/Desktop# cat bank.lst
      Aditya 0
101
                   14/11/2000
                                current
102
             10000 20/05/2011
      Anil
                                saving
103
      Naman0
                   20/08/2009
                                current
104
      Ram 10000 15/08/2010
                                saving
105
      Jyotsna
                   5000 16/06/2012
                                       saving
106
      Mukesh
                   14000 20/12/2009
                                       Current
107
      Vishal 14500 30/11/2011
                                saving
108
      Chirag 0
                   15/12/2012
                                Current
109
      Arya 16000 14/12/2010
                                Current
110
      Priya 130
                   16/11/2009
                                Saving
root@MUM084:~/Desktop# sed -n '1,/saving/p' newbank.lst
201 Viren 2000 13/05/2012 saving
101
      Aditya 0
                   14/11/2000
                                current
             10000 20/05/2011
102
      Anil
                                saving
```

```
root@MUM084:~/Desktop# cat newbank.lst
101
      Aditya 0
                    14/11/2000
                                 current
            10000 20/05/2011
102
      Anil
                                 saving
103
      Naman0
                    20/08/2009
                                 current
204 Viren 2000 13/05/2012 saving
104
      Ram 10000 15/08/2010
                                 saving
105
                    5000 16/06/2012
      Jyotsna
                                        saving
106
      Mukesh
                    14000 20/12/2009
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                                 Current
                    15/12/2012
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '4i\
> 206 viraj 3000 14/01/2011 current
> ' bank.lst >newbank.lst
root@MUM084:~/Desktop# cat newbank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
      Anil
             10000 20/05/2011
                                 saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                 current
206 viraj 3000 14/01/2011 current
104
      Ram 10000 15/08/2010
                                 saving
105
                    5000 16/06/2012
      Jyotsna
                                        saving
106
                    14000 20/12/2009
      Mukesh
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
                                 Current
      Chirag 0
                    15/12/2012
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '4a\
206 viraj 3000 14/01/2011 current
' bank.lst >newbank.lst
root@MUM084:~/Desktop# cat newbank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
             10000 20/05/2011
      Anil
                                 saving
103
      Naman0
                    20/08/2009
                                 current
104
             10000 15/08/2010
                                 saving
      Ram
206 viraj 3000 14/01/2011 current
105
      Jvotsna
                    5000 16/06/2012
                                        saving
106
      Mukesh
                    14000 20/12/2009
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
```

root@MUM084:~/Desktop# sed 'a\

<sup>&#</sup>x27; bank.lst > newbank.lst

root@MUM084:~/Desktop# cat newbank.lst 101 Aditya 0 14/11/2000 current						
102	Anil	10000	20/05/2	2011	saving	
103	Naman	10	20/08/2	2009	current	Ī
104	Ram	10000	15/08/2	2010	saving	
105	Jyotsna	a	5000	16/06/2	2012	saving
106	Mukes	h	14000	20/12/2	2009	Current
107	Vishal	14500	30/11/2	2011	saving	
108	Chirag	0	15/12/2	2012	Curren	t
109	Arya	16000	14/12/2	2010	Curren	t
110	Priya	130	16/11/2	2009	Saving	
root@MUM084:~/Desktop# sed 'i\						
' bank.lst > newbank.lst						
root@MUM084:~/Desktop# cat newbank.lst						
101	Aditya	0	14/11/2	2000	current	
102	Anil	10000	20/05/2	2011	saving	
103	Naman	10	20/08/2	2009	current	

10000 15/08/2010 104 saving Ram 105 Jyotsna 5000 16/06/2012 saving 106 Mukesh 14000 20/12/2009 Current 107 Vishal 14500 30/11/2011 saving Chirag 0 108 Current 15/12/2012 Arya 16000 14/12/2010 109 Current Priya 130 110 16/11/2009 Saving

 $root@MUM084{:}{\sim}/Desktop\#\ sed\ 'i\backslash$ 

This is blank line

<sup>&#</sup>x27; bank.lst > newbank.lst

root@MUM084:~/Desktop# cat newbank.lst This is blank line 101 Aditya 0 14/11/2000 current This is blank line 10000 20/05/2011 102 Anil saving This is blank line 103 Naman0 20/08/2009 current This is blank line Ram 10000 15/08/2010 104 saving This is blank line 105 5000 16/06/2012 **Jyotsna** saving This is blank line 106 Mukesh 14000 20/12/2009 Current This is blank line Vishal 14500 30/11/2011 107 saving This is blank line 108 Chirag 0 15/12/2012 Current This is blank line Arya 16000 14/12/2010 109 Current This is blank line 110 Priya 130 16/11/2009 Saving Deleting a line having specific pattern: root@MUM084:~/Desktop# sed '/viraj/d' newbank.lst This is blank line 14/11/2000 101 Aditva 0 current This is blank line 102 Anil 10000 20/05/2011 saving This is blank line Naman<sub>0</sub> 20/08/2009 103 current This is blank line Ram 10000 15/08/2010 104 saving This is blank line 105 **Jvotsna** 5000 16/06/2012 saving This is blank line 14000 20/12/2009 106 Mukesh Current This is blank line Vishal 14500 30/11/2011 107 saving This is blank line 108 Chirag 0 15/12/2012 Current This is blank line Arya 16000 14/12/2010 109 Current This is blank line 110 Priya 130 16/11/2009 Saving root@MUM084:~/Desktop# sed '/This is blank line/d' newbank.lst 101 Aditya 0 14/11/2000 current 102 Anil 10000 20/05/2011 saving 103 20/08/2009 Naman0 current 104 Ram 10000 15/08/2010 saving

5000 16/06/2012

saving

105

**Jyotsna** 

106	Mukes	h	14000	20/12/2	2009	Current
107	Vishal	14500	30/11/2	2011	saving	
108	Chirag	0	15/12/2	2012	Curren	ıt
109	Arya	16000	14/12/2	2010	Curren	ıt
110	Priya	130	16/11/2	2009	Saving	

#### **Substitution:**

root@MUM084:~/Desktop# sed 's/\t//' bank.lst

# this command substitues first occurence of \t by space in each line

101 Aditya	0	14/11/2000	current
102 Anil	10000	20/05/2011	saving
103 Naman	0	20/08/2009	current
104 Ram	10000	15/08/2010	saving
105 Jyotsna	5000	16/06/2012	saving
106 Mukesh	14000	20/12/2009	Current
107 Vishal	14500	30/11/2011	saving
108 Chirag	0	15/12/2012	Current
109 Arya	16000	14/12/2010	Current
110 Priya	130	16/11/2009	Saving

# to replace all occurences of \t by space:

```
root@MUM084:~/Desktop# sed 's/\t/ /g' bank.lst
```

- 101 Aditya 0 14/11/2000 current
- 102 Anil 10000 20/05/2011 saving
- 103 Naman 0 20/08/2009 current
- 104 Ram 10000 15/08/2010 saving
- 105 Jyotsna 5000 16/06/2012 saving
- 106 Mukesh 14000 20/12/2009 Current
- 107 Vishal 14500 30/11/2011 saving
- 108 Chirag 0 15/12/2012 Current
- 109 Arya 16000 14/12/2010 Current
- 110 Priya 130 16/11/2009 Saving

## root@MUM084:~/Desktop# sed 's/ \/t/g' bank.lst

101	Aditya 0		14/11/2000		current	
102	Anil	10000	20/05/2	2011	saving	
103	Naman	10	20/08/2	2009	current	
104	Ram	10000	15/08/	2010	saving	
105	Jyotsna	a	5000	16/06/2	2012	Sä

105 Jyotsna 5000 16/06/2012 saving 106 Mukesh 14000 20/12/2009 Current

107 Vishal 14500 30/11/2011 saving 108 Chirag 0 15/12/2012 Current 109 Arya 16000 14/12/2010 Current 110 Priya 130 16/11/2009 Saving

## root@MUM084:~/Desktop# sed '1,3s/ /\t/g' bank.lst

101 Aditya 0 14/11/2000 current 102 Anil 10000 20/05/2011 saving 103 Naman0 20/08/2009 current

```
104
      Ram 10000 15/08/2010
                                 saving
                    5000 16/06/2012
105
      Jyotsna
                                        saving
                    14000 20/12/2009
106
      Mukesh
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                                 Current
                    15/12/2012
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '1,3s/\t//g' bank.lst
101 Aditya 0 14/11/2000 current
102 Anil 10000 20/05/2011 saving
103 Naman 0 20/08/2009 current
104
      Ram 10000 15/08/2010
                                 saving
105
      Jyotsna
                    5000 16/06/2012
                                        saving
106
                    14000 20/12/2009
      Mukesh
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '1,3s/ \t/g' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
102
      Anil
             10000 20/05/2011
                                 saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                 current
      Ram 10000 15/08/2010
104
                                 saving
105
      Jyotsna
                    5000 16/06/2012
                                        saving
                    14000 20/12/2009
106
                                        Current
      Mukesh
107
      Vishal 14500 30/11/2011
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '1,3s/current /demat/' bank.lst
101
      Aditya 0
                    14/11/2000
                                 current
           10000 20/05/2011
102
      Anil
                                 saving
103
      Naman0
                    20/08/2009
                                 current
104
      Ram 10000 15/08/2010
                                 saving
105
      Jvotsna
                    5000 16/06/2012
                                        saving
106
      Mukesh
                    14000 20/12/2009
                                        Current
      Vishal 14500 30/11/2011
107
                                 saving
108
      Chirag 0
                    15/12/2012
                                 Current
109
      Arya 16000 14/12/2010
                                 Current
110
      Priya 130
                    16/11/2009
                                 Saving
root@MUM084:~/Desktop# sed '1,3s/current/demat/' bank.lst
101
      Aditva 0
                    14/11/2000
                                 demat
102
             10000 20/05/2011
      Anil
                                 saving
103
      Naman0
                    20/08/2009
                                 demat
104
            10000 15/08/2010
                                 saving
      Ram
105
      Jvotsna
                    5000 16/06/2012
                                        saving
106
                    14000 20/12/2009
      Mukesh
                                        Current
107
      Vishal 14500 30/11/2011
                                 saving
```

```
108 Chirag 0 15/12/2012 Current
109 Arya 16000 14/12/2010 Current
110 Priya 130 16/11/2009 Saving
```

#### **Remembered Patterns in sed**

```
root@MUM084:\sim/Desktop\# sed -n '/([Aa]\)/([a-z]\)/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
      Anil 10000 20/05/2011
102
                                  saving
103
      Naman0
                    20/08/2009
                                  current
104
             10000 15/08/2010
      Ram
                                  saving
105
                    5000 16/06/2012
                                        saving
      Jvotsna
107
      Vishal 14500 30/11/2011
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:\sim/Desktop\# sed -n '/([Aa]\)/([a-z]*\)/p' bank.lst
      Aditya 0
101
                    14/11/2000
                                  current
102
      Anil
             10000 20/05/2011
                                  saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                  current
      Ram 10000 15/08/2010
104
                                  saving
105
      Jvotsna
                    5000 16/06/2012
                                        saving
107
      Vishal 14500 30/11/2011
                                  saving
108
      Chirag 0
                                  Current
                    15/12/2012
109
      Arya 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:\sim/Desktop\#sed-n'/([Aa]\)([Dd]*\)/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
102
            10000 20/05/2011
      Anil
                                  saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                  current
104
      Ram
             10000 15/08/2010
                                  saving
105
      Jyotsna
                    5000 16/06/2012
                                        saving
      Vishal 14500 30/11/2011
107
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
110
      Priva 130
                    16/11/2009
                                  Saving
root@MUM084:\sim/Desktop\#sed-n'/([Aa]/)/p'bank.lst
      Aditya 0
101
                    14/11/2000
                                  current
            10000 20/05/2011
102
      Anil
                                  saving
103
      Naman<sub>0</sub>
                    20/08/2009
                                  current
104
      Ram 10000 15/08/2010
                                  saving
105
      Jyotsna
                    5000 16/06/2012
                                        saving
107
      Vishal 14500 30/11/2011
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:~/Desktop# sed -n '\\([Cc]\)/p' bank.lst
      Aditya 0
101
                    14/11/2000
                                  current
```

```
103
      Naman0
                    20/08/2009
                                  current
106
      Mukesh
                    14000 20/12/2009
                                        Current
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arya 16000 14/12/2010
                                  Current
root@MUM084:\sim/Desktop\# sed -n '/([Pp]/)/p' bank.lst
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:\sim/Desktop\# sed -n '/([A]\)/p' bank.lst
      Aditya 0
                    14/11/2000
101
                                  current
102
      Anil
             10000 20/05/2011
                                  saving
109
      Arya 16000 14/12/2010
                                  Current
root@MUM084:\sim/Desktop\# sed -n '/\([^Pp]\)/p' bank.lst
      Aditya 0
                    14/11/2000
101
                                  current
102
      Anil
             10000 20/05/2011
                                  saving
103
      Naman0
                    20/08/2009
                                  current
      Ram 10000 15/08/2010
104
                                  saving
105
                    5000 16/06/2012
      Jyotsna
                                        saving
106
      Mukesh
                    14000 20/12/2009
                                         Current
      Vishal 14500 30/11/2011
107
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
109
      Arva 16000 14/12/2010
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
root@MUM084:\sim/Desktop\# sed -n '/([Aa]\)([d]\)/p' bank.lst
                    14/11/2000
101
      Aditya 0
                                  current
root@MUM084: \sim /Desktop\# sed -n '/\([Aa]\)\([n]\)/p' bank.lst
102
      Anil 10000 20/05/2011
                                  saving
103
      Naman0
                    20/08/2009
                                  current
root@MUM084:\sim/Desktop\# sed -n '\([i]\)\([a-z]*\)/p' bank.lst
101
      Aditya 0
                    14/11/2000
                                  current
102
      Anil
             10000 20/05/2011
                                  saving
             10000 15/08/2010
104
      Ram
                                  saving
105
                                        saving
      Jyotsna
                    5000 16/06/2012
107
      Vishal 14500 30/11/2011
                                  saving
108
      Chirag 0
                    15/12/2012
                                  Current
110
      Priya 130
                    16/11/2009
                                  Saving
```

root@MUM084:~/Desktop#