SUBJECT: OPERATING SYSTEM.

AIM: To Study shell program in order to count the number of files using command line argument, to validate date and its format. Also to check if file has Write accessibility.

THEORY:

1) Count the number of files using command line arguments.
There are certain special variables that can be used in the Shell Script:
i). $0 : The filename of the current script.

ii) $n : These variables correspond to the arguments with which a script was invoked. Here "n" is a positive decimal number corresponding to the position of an argument (the first argument is $1, the second argument is $2 and so on).

iii). $# : The number of arguments supplied to a script.

iv). $* : All the arguments are double quoted. If a script receives two arguments, $* is equivalent to $1 $2.

v). $@ : All of the arguments are individually double quoted. If a script receives two arguments, $@ is equivalent to $1 $2

vi). $? : The exit status of the last command executed.

vii). $$: The process number of the current shell. For shell scripts, this is the process ID under which they are executing.

viii). $! : The process number of the last background command.

2) Validate date and its format.
Before starting with validation first take an input from user in a particular format.
Eg. 02-04-17

```
echo "Enter date:"
read d
if echo $d | grep [0-3][0-9][-][0-1][0-9][-]
  [0-9][0-9]
then
echo -e "\n $d is a valid date"
else
echo -e "\n $d is not a valid date".
fi
```

Explaination for grep command used in the code
[0-3] checks the first of digit if its between 0 to 3.
[0-9] ensures second digit is between 0 to 9.
[-] ensures third character is "-" (hyphen).
[0-1] ensures fourth digit is either 0 or 1.
[0-9] ensures fifth digit is between 0 to 9.
[-] ensures sixth character is "-" (hyphen).
[0-9] ensures seventh digit is between 0 to 9.
[0-9] ensures eighth digit is between 0 to 9.

3) Check if the file has write Accessibility or not.

```
echo -e "\n Enter filename: "
read f
if [-w $f]
then
echo -e "\n $f has write permissions"
else
echo -e "\n $f does not have write permissions"
fi.
```

Explaination for "if condition" used in the code.
$f It denotes the filename entered by the user.
-w This will check if the file name in $f has write permissions.