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Course:	Operating System (BSSE)
Section:	5-2

LAB 09

Task 01:

```
sufyanahmed@55766:~$ cd Downloads/  
sufyanahmed@55766:~/Downloads$ mkdir lab9  
sufyanahmed@55766:~/Downloads$ cd lab9  
sufyanahmed@55766:~/Downloads/lab9$ touch lab9  
sufyanahmed@55766:~/Downloads/lab9$ touch lab9.sh  
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9.sh  
echo "welcome to shell scripting"  
echo "this is lab 9"  
sufyanahmed@55766:~/Downloads/lab9$ chmod u+x lab9.sh  
sufyanahmed@55766:~/Downloads/lab9$ ./lab9.sh  
welcome to shell scripting  
this is lab 9
```

Task 02:

```
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9.sh
#!/bin/sh

date # todays date
echo -r "this is lab 9 by using magic command " #message
cat<lab9.sh #print the code of this file
sufyanahmed@55766:~/Downloads/lab9$ ./lab9.sh
Mon Oct 27 11:50:23 PM PDT 2025
-r this is lab 9 by using magic command
#!/bin/sh

date # todays date
echo -r "this is lab 9 by using magic command " #message
cat<lab9.sh #print the code of this file
```

Task 03:

```
sufyanahmed@55766:~/Downloads/lab9$ expr 2+5
2+5
sufyanahmed@55766:~/Downloads/lab9$
sufyanahmed@55766:~/Downloads/lab9$ expr 2 + 5
7
sufyanahmed@55766:~/Downloads/lab9$ expr 2 + 3 / 3
3
```

Task 04:

```
sufyanahmed@55766:~/Downloads/lab9$ touch lab9task4.sh
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9task4.sh
#!/bin/sh
x=5
y=0
echo "The vlaue of x=" $x
y=$(expr $x + 5)
echo "The value of y=" $y
sufyanahmed@55766:~/Downloads/lab9$ ./lab9task4.sh
The vlaue of x= 5
The value of y= 10
```

Task 05:

```
sufyanahmed@55766:~/Downloads/lab9$ touch lab9task5.sh
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9task5.sh
#!/bin/sh
echo "Enter first number: "
read a
echo "Enter second number: "
read b
sum=$(expr "$a" + "$b")
echo "The sum of $a and $b is: $sum"
sufyanahmed@55766:~/Downloads/lab9$ ./lab9task5.sh
bash: ./lab9task5.sh: Permission denied
sufyanahmed@55766:~/Downloads/lab9$ chmod u+x lab9task5.sh
sufyanahmed@55766:~/Downloads/lab9$ ./lab9task5.sh
Enter first number:
2
Enter second number:
5
The sum of 2 and 5 is: 7
```

Task 06:

```
sufyanahmed@55766:~/Downloads/lab9$ touch lab9task6.sh
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9task6.sh
#!/bin/sh

a=5
b=7
c=5.5

result=$(echo "scale=4; ($a + $b) / $c" | bc -l)
echo "a= $a, b= $b, c= $c"
echo "Result (a*b/c) = $result"

sufyanahmed@55766:~/Downloads/lab9$ chmod u+x lab9task6.sh
sufyanahmed@55766:~/Downloads/lab9$ ./lab9task6.sh
a= 5, b= 7, c= 5.5
Result (a*b/c) = 2.1818
```

Task 07:

```
sufyanahmed@55766:~/Downloads/lab9$ touch lab9task7.sh
```

```
sufyanahmed@55766:~/Downloads/lab9$ cat>lab9task7.sh
#!/bin/sh

echo "Enter Directory Name: "
read dirname

if [ -z "$dirname" ]; then
    echo "No directory name provided. Existing."
    exit 1
fi
mkdir -p "$dirname" || { echo "Failed to create directory '$dirname'"; exit 1; }

date > "$dirname/timestamp"

echo "Directory '$dirname' create (if not already).\"
echo "File '$dirname/timestamp' created with current date/time:\"
cat \"$dirname/timestamp\"
sufyanahmed@55766:~/Downloads/lab9$ ./lab9task7.sh
Enter Directory Name:
lab9task7
Directory 'lab9task7' create (if not already).
File 'lab9task7/timestamp' created with current date/time:
Tue Oct 28 12:40:07 AM PDT 2025
sufyanahmed@55766:~/Downloads/lab9$
```