OS LAB 3

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22F-3168

Task 1:

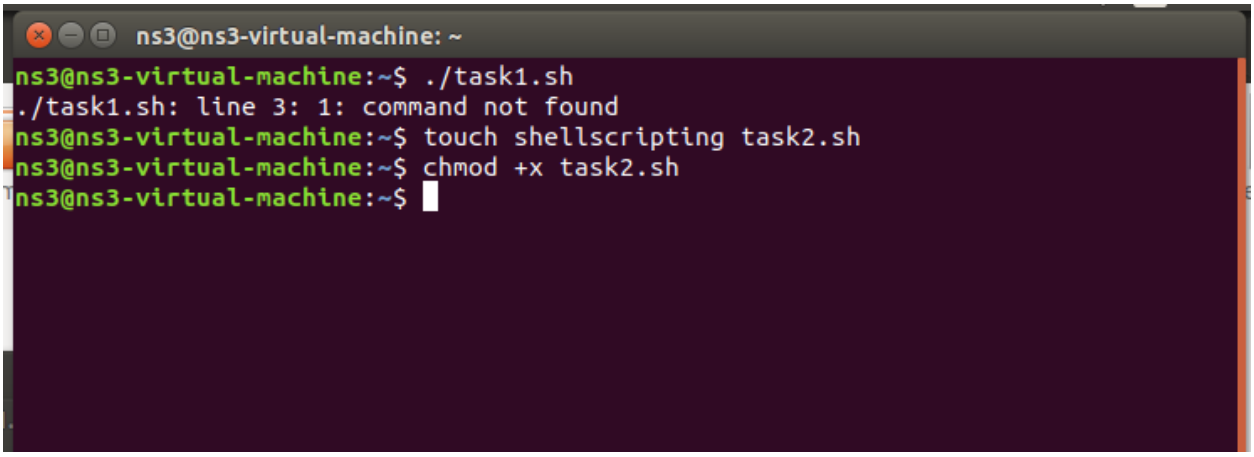
```
ask=1


while [ $ask -eq 1 ]
do
read -p "Enter your First name: " fname
read -p "Enter your Last name: " lname
read -p "Enter your Favorite color: " fcolor
stdid="22F-3168"

echo "Hello, $fname $lname! Your favorite color is $fcolor, and your student ID is $stdid. Welcome!"

read -p "Would you like to enter another set of information? Enter 1 to add and Enter 0 to terminate: "
ask

if [ $ask -eq 0 ]; then
echo "Goodbye :)"
break
fi
done
```

```
ns3@ns3-virtual-machine: ~
ns3@ns3-virtual-machine:~$ ./task1.sh
Enter your First name: Mariam
Enter your Last name: Fatima
Enter your Favorite color: Blue
Hello, Mariam Fatima! Your favorite color is Blue, and your student ID is 22F-31
68. Welcome!
Would you like to enter another set of information? Enter 1 to add and Enter 0 t
o terminate: 1
Enter your First name: Eeman
Enter your Last name: Khalid
Enter your Favorite color: Pink
Hello, Eeman Khalid! Your favorite color is Pink, and your student ID is 22F-316
8. Welcome!
Would you like to enter another set of information? Enter 1 to add and Enter 0 t
o terminate: 0
Goodbye :)
ns3@ns3-virtual-machine:~$
```

task1.sh × *task2.sh ×

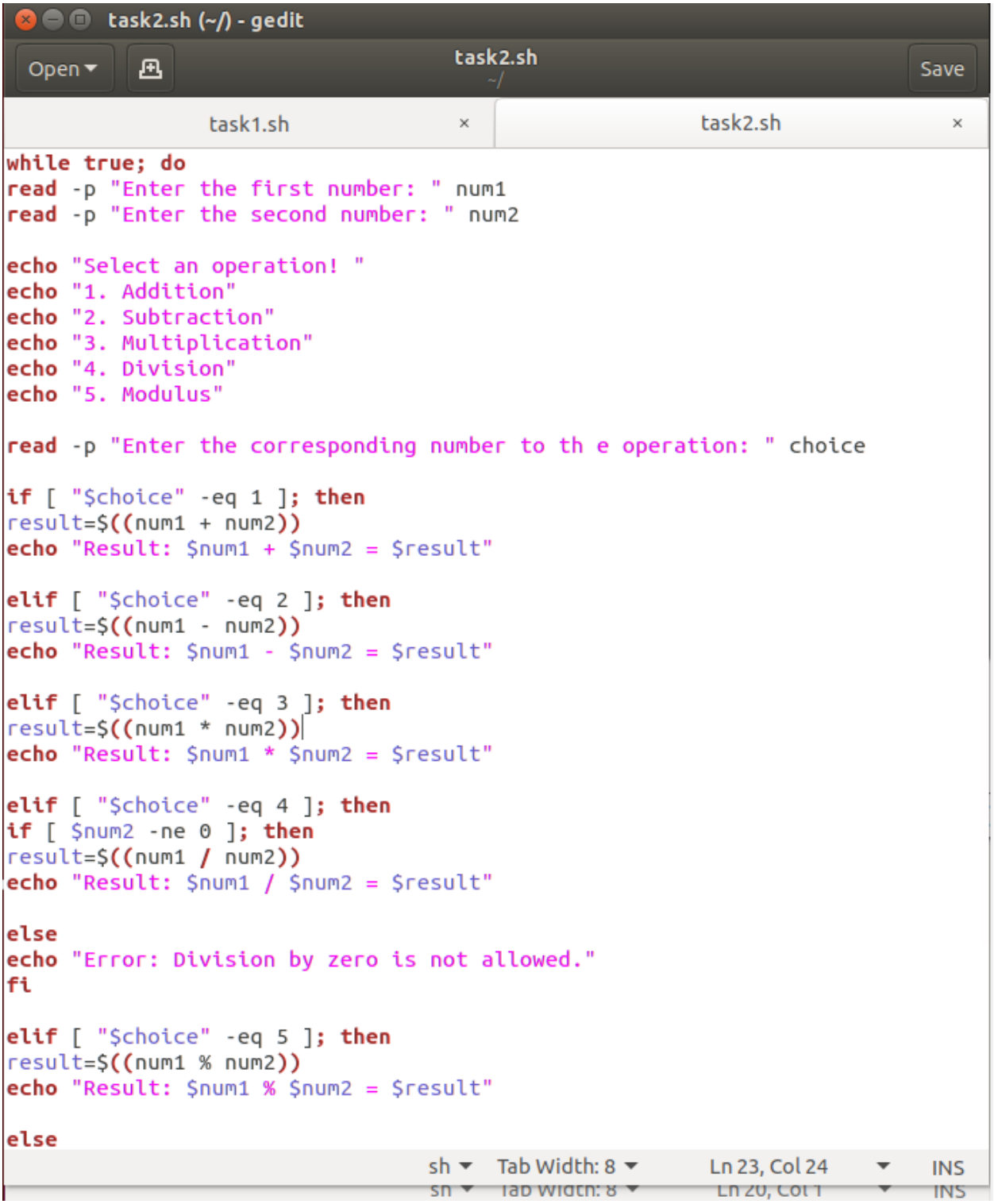
```
ask=1

while [ $ask -eq 1 ]
do
read -p "Enter your First name: " fname
read -p "Enter your Last name: " lname
read -p "Enter your Favorite color: " fcolor
stdid="22F-3168"

echo "Hello, $fname $lname! Your favorite color is $fcolor, and your
student ID is $stdid. Welcome!"

read -p "Would you like to enter another set of information? Enter 1 to add
and Enter 0 to terminate: " ask

if [ $ask -eq 0 ]; then
echo "Goodbye :)"
break
fi
done
```

Task 2:

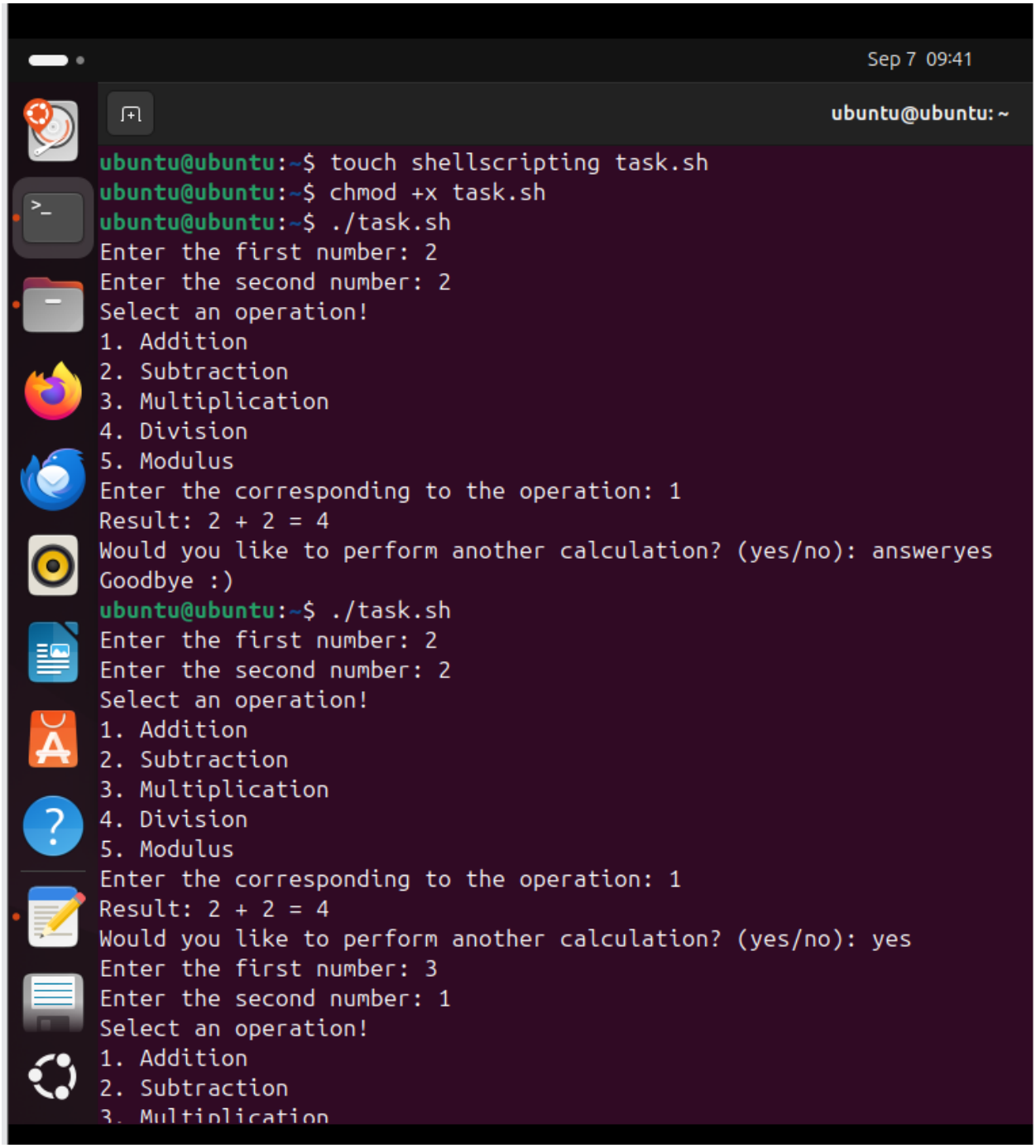



```
while true; do

read -p "Enter the first number: " num1

read -p "Enter the second number: " num2


echo "Select an operation! "

echo "1. Addition"

echo "2. Subtraction"

echo "3. Multiplication"

echo "4. Division"

echo "5. Modulus"


read -p "Enter the corresponding number to the operation: " choice


if [ "$choice" -eq 1 ]; then

result=$((num1 + num2))

echo "Result: $num1 + $num2 = $result"


elif [ "$choice" -eq 2 ]; then

result=$((num1 - num2))

echo "Result: $num1 - $num2 = $result"
```

```
elif [ "$choice" -eq 3 ]; then
result=$((num1 * num2))
echo "Result: $num1 * $num2 = $result"

elif [ "$choice" -eq 4 ]; then
if [ $num2 -ne 0 ]; then
result=$((num1 / num2))
echo "Result: $num1 / $num2 = $result"

else
echo "Error: Division by zero is not allowed."
fi

elif [ "$choice" -eq 5 ]; then
result=$((num1 % num2))
echo "Result: $num1 % $num2 = $result"

else
echo "Invalid choice. Please select a valid operation."
fi

read -p "Would you like to perform another calculation? (yes/no): " answer
if [ "$answer" != "yes" ]; then
echo "Goodbye :)"
break
fi
done
```


task2.sh (~/) - gedit
Open
task2.sh
~/
Save
task1.sh
task2.sh
while true; do
read -p "Enter the first number: " num1
read -p "Enter the second number: " num2
echo "Select an operation! "
echo "1. Addition"
echo "2. Subtraction"
echo "3. Multiplication"
echo "4. Division"
echo "5. Modulus"
read -p "Enter the corresponding number to th e operation: " choice
if ["$choice" -eq 1]; then
result=$((num1 + num2))
echo "Result: $num1 + $num2 = $result"
elif ["$choice" -eq 2]; then
result=$((num1 - num2))
echo "Result: $num1 - $num2 = $result"
elif ["$choice" -eq 3]; then
result=$((num1 * num2))
echo "Result: $num1 * $num2 = $result"
elif ["$choice" -eq 4]; then
if [$num2 -ne 0]; then
result=$((num1 / num2))
echo "Result: $num1 / $num2 = $result"
else
echo "Error: Division by zero is not allowed."
fi
elif ["$choice" -eq 5]; then
result=$((num1 % num2))
echo "Result: $num1 % $num2 = $result"
else
sh
Tab Width: 8
Ln 23, Col 24
INS

```
else
echo "Invalid choice. Please select a valid operation."
fi

read -p "Would you like to perform another calculation? (yes/no): " answer
if [ "$answer" != "yes" ]; then
echo "Goodbye :)"
break
fi
done
```


Sep 7 09:41
ubuntu@ubuntu: ~
ubuntu@ubuntu:~$ touch shellscripting task.sh
ubuntu@ubuntu:~$ chmod +x task.sh
ubuntu@ubuntu:~$ ./task.sh
Enter the first number: 2
Enter the second number: 2
Select an operation!
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 1
Result: 2 + 2 = 4
Would you like to perform another calculation? (yes/no): answeryes
Goodbye :)
ubuntu@ubuntu:~$ ./task.sh
Enter the first number: 2
Enter the second number: 2
Select an operation!
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 1
Result: 2 + 2 = 4
Would you like to perform another calculation? (yes/no): yes
Enter the first number: 3
Enter the second number: 1
Select an operation!
1. Addition
2. Subtraction
3. Multiplication

```
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 2
Result: 3 - 1 = 2
Would you like to perform another calculation? (yes/no): yes
Enter the first number: 3
Enter the second number: 3
Select an operation!
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 3
Result: 3 * 3 = 9
Would you like to perform another calculation? (yes/no): yes
Enter the first number: 4
Enter the second number: 2
Select an operation!
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 4
Result: 4 / 2 = 2
Would you like to perform another calculation? (yes/no): yes
Enter the first number: 10
Enter the second number: 3
Select an operation!
1. Addition
2. Subtraction
```

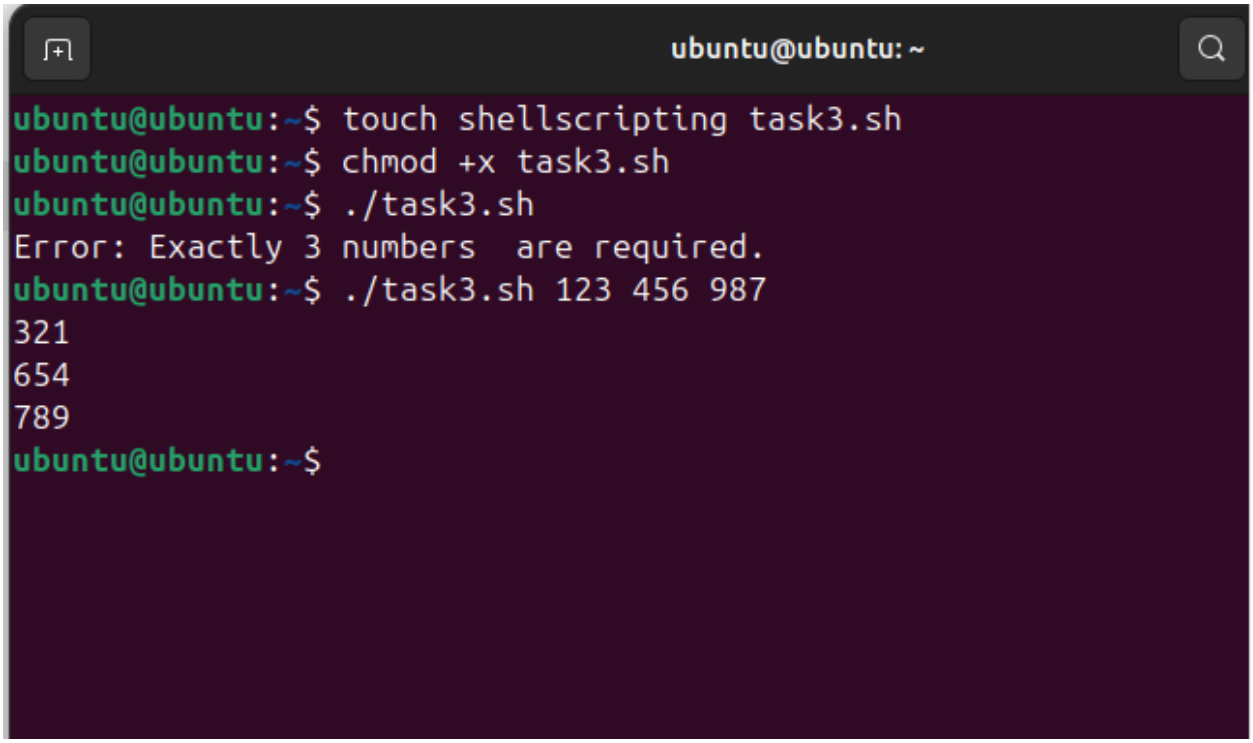
```
Select an operation!
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the corresponding to the operation: 5
Result: 10 % 3 = 1
Would you like to perform another calculation? (yes/no): no
Goodbye :)
ubuntu@ubuntu:~$
```

Task 3:

Open • task3.sh ~/

```
if [ "$#" -ne 3 ]; then
echo "Error: Exactly 3 numbers  are required. "
exit
fi

echo "$1" | rev

echo "$2" | rev

echo "$3" | rev
```

Rhythmbox



Reference from this website: https://www.geeksforgeeks.org/rev-command-in-linux-with-examples/

Task 4:

Open • task4.sh ~/

```
read -p "Enter first number: " num1
read -p "Enter second number: " num2

var1=0
for ((i=1; i<=num1; i++)) do
num=$num1
temp=$i
while [ "$temp" -ne 0 ]; do
remainder=$((num % temp))
num=$temp
temp=$remainder
done
if [ "$num" -eq 1 ]; then
var1=$((var1 + 1))
fi
done

if [ $((num1 % 2)) -eq 0 ]; then
echo "$num1 is even. phi($num1) = $var1"
else
echo "$num1 is odd. phi($num1) = $var1"
fi
```

Open • task4.sh ~/

```
var2=0
for ((i=1; i<=num2; i++)) do
num=$num2
temp=$i
while [ "$temp" -ne 0 ]; do
remainder=$((num % temp))
num=$temp
temp=$remainder
done
if [ "$num" -eq 1 ]; then
var2=$((var2 + 1))
fi
done

if [ $((num2 % 2)) -eq 0 ]; then
echo "$num2 is even. phi($num2) = $var2"
else
echo "$num2 is odd. phi($num2) = $var2"
fi
```

```
ubuntu@ubuntu:~$ touch shellscripting task4.sh
ubuntu@ubuntu:~$ chmod +x task4.sh
```

```
ubuntu@ubuntu:~$ ./task4.sh
Enter first number: 3
Enter second number: 4
3 is odd. phi(3) = 2
4 is even. phi(4) = 2
ubuntu@ubuntu:~$
```

Task 5:

Open

task5.sh
~/

```
read -p "Enter the day number of the week: " day
case $day in
1)
echo "start of the week -> Monday"
;;
2)
echo "Get Through -> Tuesday"
;;
3)
echo "Half of week -> Wednesday"
;;
4)
echo "Charity -> Thursday"
;;
5)
echo "Blessed -> Friday"
;;
6)
echo "Rest -> Saturday"
;;
7)
echo "Recharge for the week-> Sunday"
;;
*)
echo "Invalid Input!"
;;
esac
```

```
ubuntu@ubuntu:~$ touch shellscripting task5.sh
ubuntu@ubuntu:~$ chmod +x task5.sh
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 1
start of the week -> Monday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 2
Get Through -> Tuesday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 3
Half of week -> Wednesday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 4
Charity -> Thursday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 5
Blessed -> Friday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 6
Rest -> Saturday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 7
Recharge for the week-> Sunday
ubuntu@ubuntu:~$ ./task5.sh
Enter the day number of the week: 8
Invalid Input!
ubuntu@ubuntu:~$
```

Task 6:

Open

task6.sh
~/

```
read -p "Enter first number: " num1
read -p "Enter second number: " num2

if [[ $num1 -gt 500 && $num1 -lt 1000 && $num2 -gt 500 && $num2 -lt 1000 ]]; then
echo "Both numbers are greater than 500 and less than 1000"

else
echo "Both numbers are Not greater than 500 and less than 1000"
fi
```

```
ubuntu@ubuntu:~$ touch shellscripting task6.sh
ubuntu@ubuntu:~$ chmod task6.sh
chmod: missing operand after ‘task6.sh’
Try 'chmod --help' for more information.
ubuntu@ubuntu:~$ chmod +x task6.sh
ubuntu@ubuntu:~$ ./task6.sh
Enter first number: 600
Enter second number: 1222
Both numbers are Not greater than 500 and less than 1000
ubuntu@ubuntu:~$ ./task6.sh
Enter first number: 600
Enter second number: 800
Both numbers are greater than 500 and less than 1000
ubuntu@ubuntu:~$ ./task6.sh
Enter first number: 400
Enter second number: 2000
Both numbers are Not greater than 500 and less than 1000
```