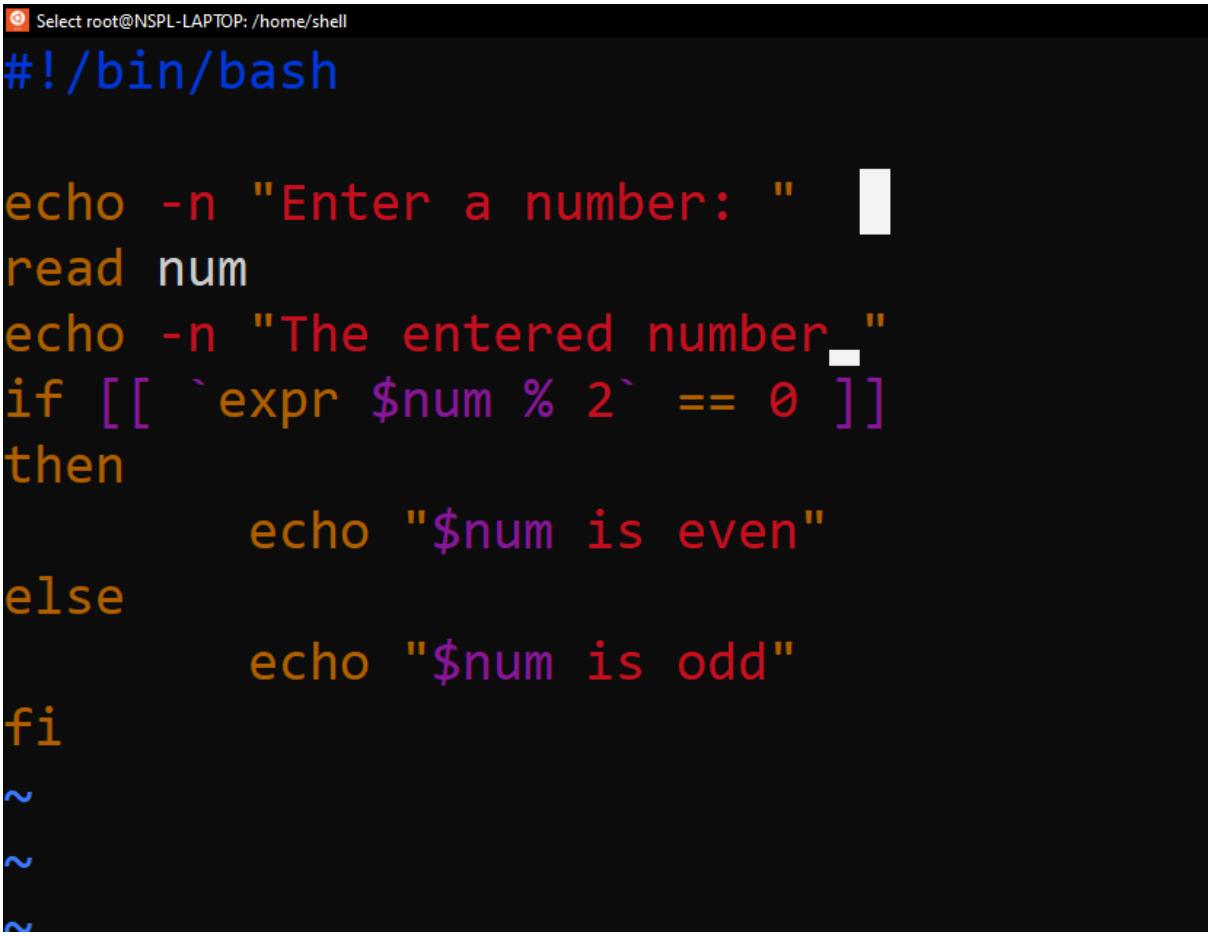
1.Write a shell program to find if the inputted number is even or odd.



2.Write a shell program to compute the bill amount by applying below rules

a. if the purchase amount is less than 1000, then the applicable tax is 5% and the discount is 10%

b. if the amount is 1000 or greater then the tax applicable is 7% and the discount is 20%

```
#2.Write a shell program to compute the bill amount by applying below
#a. if the purchase amount is less than 1000, then the applicable tax
#b. if the amount is 1000 or greater then the tax applicable is 7% an
echo "Enter the purchase amount: "
read amount
if [[ $amount -lt 1000  ]]
then
        tax=`echo 5*$amount/100 | bc -s`
        Tamount=`echo $amount + $tax | bc -s`
        discount=`echo 10*$Tamount/100 | bc -s`
        echo "Final amount = `echo $Tamount - $discount | bc -s`"
else
        tax=`echo 7*$amount/100 | bc -s`
        Tamount=`echo $amount + $tax | bc -s`
        discount=`echo 20*$Tamount/100 | bc -s`
        echo "Final amount = `echo $Tamount - $discount | bc -s`"
fi
~
```

3.Write a shell program to generate a Fibonacci series.

```
#!/bin/bash

echo -n "Enter a number: "
read n
a=0
b=1

echo "Fibonacci series is  "

for (( i=0; i<n; i++ ))
do
        echo -n "$a "
        fn=$((a+b))
        a=$b
        b=$fn
done
~
```

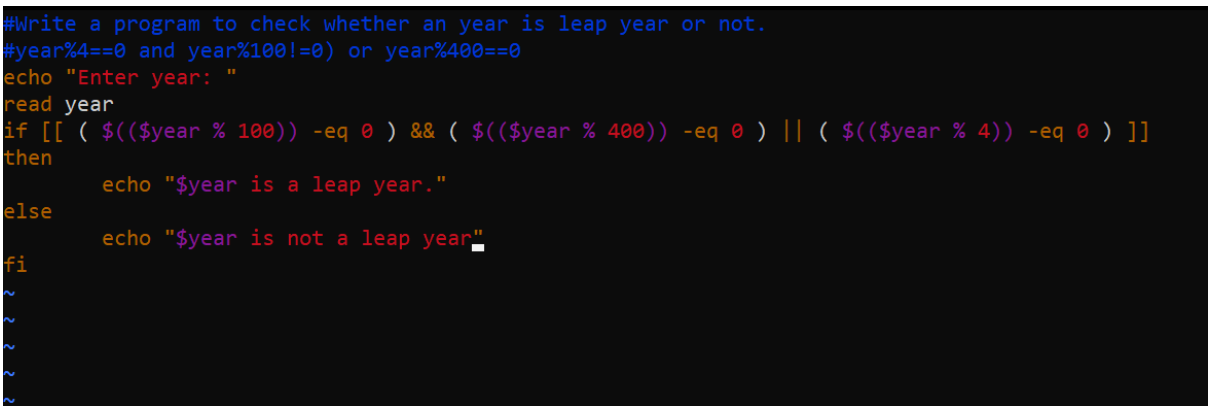
4.Write a shell program to find the greatest number of given 3 numbers

```
#!/bin/bash
echo "Enter 1st number: "
read num1
echo "Enter 2nd number: "
read num2
echo "Enter 3rd number: "
read num3
if [[ $num1 -gt $num2 ]] && [[ $num1 -gt $num3 ]]
then
        echo "$num1 is greatest"
elif [[ $num2 -gt $num1 ]] && [[ $num2 -gt $num3 ]]
then
        echo "$num2 is greatest"
else
        echo "$num3 is greatest."
fi
~
```

5 .Build a calculator with basic operations add, subtract, multiply and divide using shell program switch statement.

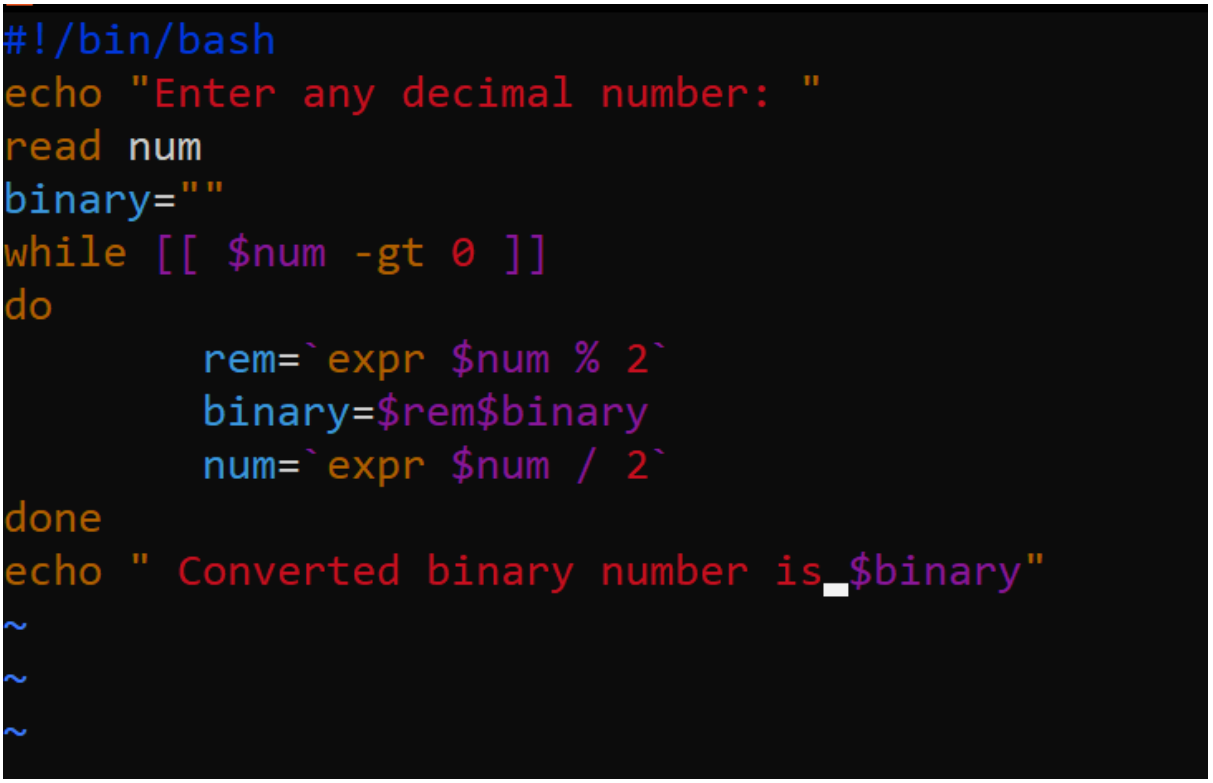
```
#Build a calculator with basic operations add, subtract, multiply and d

echo "Enter the number_1:- "
read num1
echo "Enter the number_2:- "
read num2
echo a=add
echo b=subtract
echo c=multiply
echo d=divide
echo Please choose a option
read choice
case $choice in
        a) echo $((num1+num2));;
        b) echo $((num1-num2));;
        c) echo $((num1*num2));;
        d) echo $((num1/num2));;
        *) echo "Not a valid input"
esac
~
```

6. Write a shell program to find if the inputted year is leap or not.



```
#Write a program to check whether an year is leap year or not.
#year%4==0 and year%100!=0) or year%400==0
echo "Enter year: "
read year
if [[ ( $(($year % 100)) -eq 0 ) && ( $(($year % 400)) -eq 0 ) || ( $(($year % 4)) -eq 0 ) ]]
then
        echo "$year is a leap year."
else
        echo "$year is not a leap year"
fi
~
~
~
~
~
```

7. Write a shell program to convert a decimal number to binary equivalent.



```
#!/bin/bash
echo "Enter any decimal number: "
read num
binary=""
while [[ $num -gt 0 ]]
do
        rem=`expr $num % 2`
        binary=$rem$binary
        num=`expr $num / 2`
done
echo " Converted binary number is $binary"
~
~
~
```

8. Write a script to swap 2 numbers using an intermediate variable.

```
#!bin/bash
echo "Enter first number: "
read num1
echo "Enter second number: "
read num2
echo "Before swaping First_Number = $num1 and Second_Number = $num2"
temp=$num1
num1=$num2
num2=$temp
echo "After swaping First_Number = $num1 and First_Number = $num2"

~
~
~
~
```

9. print multiplication table of integer using while loop.

Example:
2 x 1 = 2
2 x 2 = 4

```
#!/bin/bash
#print multiplication table of integer using while loop
#while using while loop we have to initialize i=1.
read -p "Enter a number: " number
i=1
while [ $i -le 10 ]
do
        echo "$number x $i = $((number*i))"
        i=$((i+1))
done
~
~
~
```

10. Write a script to read the number of rows to be displayed in the pattern and print following pattern using for loop:

1
2 3
4 5 6

```
#!/bin/bash
echo "Enter a number of rows: "
read n
k=0
for((i=0; i<n; i++))
do
        echo " "
        for((j=0; j<=i; j++))
        do
                k=$((k+1))
                echo -n "$k "
        done
done

~
```