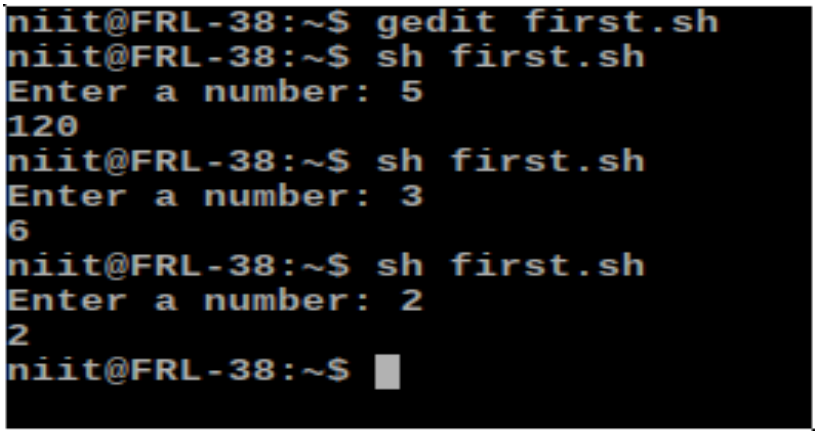
Q1
Code

```
read -p "enter a no to calculate the factorial of a number: " num
f=1
 while [ $num -gt 1 ]
do
  f=$((fact*num))
  num=$((num-1))
done
echo $fact
```

Output

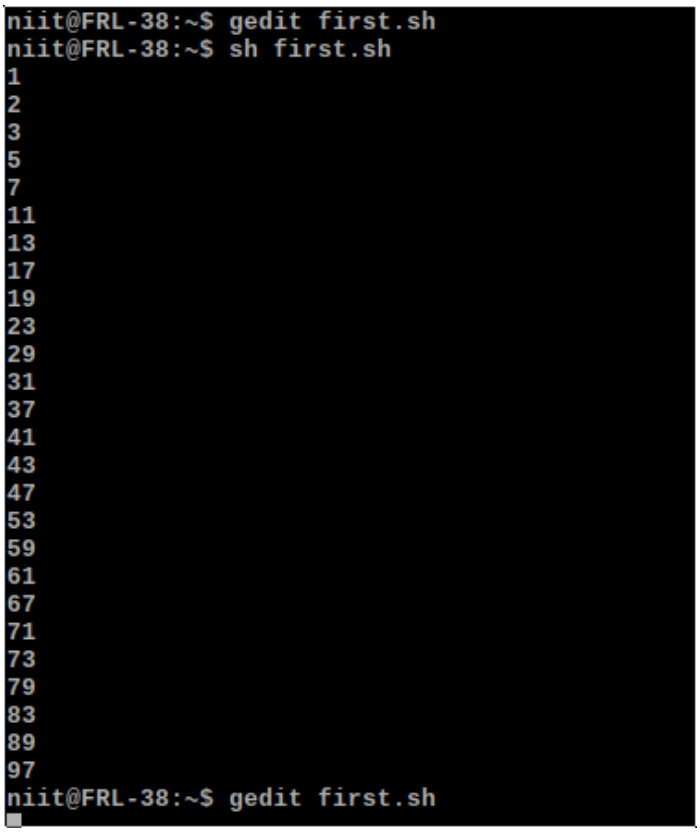


Q2
Code

```
is_prime() {
  num=$1
  i=2
  while [ $i -lt $num ]
  do
    if [ $(($num % $i)) -eq 0 ]
    then
      return 1 # Not a prime
    fi
    i=$((i+1))
  done
  return 0 # Prime
}
# Loop through numbers 1 to 100
num=1
```

```
while [ $num -le 100 ]
do
  is_prime $num
  if [ $? -eq 0 ] # If the function returns 0, then the number is prime
  then
    echo $num
  fi
  num=$((num+1))
done
```

Output



Q3
Code

```
echo "Enter your marks:"
read mark
if [ $mark -ge 90 ] && [ $mark -le 100 ]
then Grade="A"
elif [ $mark -ge 70 ] && [ $mark -le 89 ]
then Grade="B"
```

```
elif [ $mark -ge 40 ] && [ $mark -le 69 ]
then Grade="C"
else [ $mark -le 40]
Grade="F"
fi
echo "you achieve: $Grade"
```

Output

```
Enter the student mark:
99
Grade: Grade A
niit@FRL-38:~$ sh first.sh
Enter the student mark:
99.9
first.sh: 5: [: Illegal number: 99.9
first.sh: 8: [: Illegal number: 99.9
Grade:
niit@FRL-38:~$ gedit first.sh
niit@FRL-38:~$ sh first.sh
Enter your marks:
33
first.sh: 12: Syntax error: "then" unexpected (expecting "fi")
niit@FRL-38:~$ gedit first.sh
^[[A^[[A^C
niit@FRL-38:~$ sh first.sh
Enter your marks:
33
first.sh: 11: [: missing ]
you achive: F
niit@FRL-38:~$ gedit first.sh
```