**FUNDAMENTALS OF COMPUTING**

**Shell programs**

1. **Arthematic operations**

**Program:**

**echo "enter the first number"**

**read n1**

**echo "enter the second number"**

**read n2**

**sum=$((n1+n2))**

**echo "sum of the numbers is:$sum"**

**sub=$((n1-n2))**

**echo "the difference of two numbers is:$sub"**

**mul=$((n1\*n2))**

**echo "product of two numbers is:$mul"**

**div=$((n1/n2))**

**echo "quo of two numbers is:$div"**

1. **String are equal or not**

**Program:**

**echo "enter the first string:"**

**read str1**

**echo "enter the second string:"**

**read str2**

**if[$str1=$str2]**

**then**

**echo "strings are equal"**

**else**

**echo "strings are not equal"**

1. **Reverse a string**

**Program:**

**echo "enter the string"**

**read str**

**strlen=${#str}**

**for((i=$strlen-1;i>=0;i--))**

**do**

**revstr=$revstr${str:$i:1}**

**done**

**echo "reversed string:$revstr"**

1. **Length of a string**

**Program:**

**echo “enter the string”**

**read str**

**n=${#str}**

**echo “length of the string is:$n”**

1. **Lower case to upper case**

**Program**

**echo “enter the string”**

**read str**

**echo “upper case of the string is:${str^^}”**

1. **Leap year**

**Program:**

**echo "enter the year"**

**read y**

**y=$(( $y % 4 ))**

**if [ $y -eq 0 ]**

**then**

**echo "$year is leap"**

**else**

**echo "$year is not leap"**

**fi**

1. **Square**

**Program:**

**echo “enter a value:”**

**read $a**

**sq=$(($a\*$a))**

**echo $sq**

1. **Natural numbers**

**Program:  
echo “enter n value:”**

**read n**

**for((i=1;i<=n;i++))**

**do**

**echo “$i”**

**done**

1. **Cube of a number**

**Program:**

**echo “enter a value:”**

**read $a**

**cube=$(($a\*$a\*$a))**

**echo $cube**

1. **Greatest among three numbers**

**Program:**

**echo n1**

**read n1**

**echo n2**

**read n2**

**echo n3**

**read n3**

**if [$n1 -gt $n2] && [$n1 -gt $n3]**

**then**

**echo “ $n1”**

**elif [$n2 -gt $n1] && [$n2 -gt $n3]**

**then**

**echo “$n2”**

**else**

**echo “$n3”**

**fi**