**Array**

**1**.declare -a arr

function randomnumber() {

for ((i=0;i<10;i++))

do

randomnumber=$(( (RANDOM%900) + 100 ))

arr[$i]=$randomnumber

done

echo ${arr[@]}

}

function secondLargest(){

secondLarge=$1

largest=$1

for temp in ${arr[@]}

do

if [[ $temp -gt $largest ]]

then

secondLarge=$largest

largest=$temp

elif [[ $temp -gt secondLarge ]]

then

secondLarge=$temp

fi

done

echo "Largest element in array is:$largest"

echo "Second Largest element in array is:$secondLarge"

}

function secondSmallest(){

secondSmall=$1

smallest=$1

for temp in ${arr[@]}

do

if [[ $temp -lt $smallest ]]

then

secondSmall=$smallest

smallest=$temp

elif [[ $temp -lt secondSmall ]]

then

secondSmall=$temp

fi

done

echo "Smallest element in array is: $smallest"

echo "Second Smallest element in array is: $secondSmall"

}

randomnumber

secondLargest ${arr[@]}

secondSmallest ${arr[@]}

**2**.function sorting(){

for (( index=0; index<10; index++ ))

do

temp=0

for (( j=0; j<10; j++ ))

do

if [[ ${arr[j]} -lt ${arr[index]} ]]

then

temp=${arr[index]}

arr[index]=${arr[j]}

arr[j]=$temp

echo ${arr[@]}

fi

done

done

echo Second Largest in an array ${arr[1]}

echo Second Smallest in an array ${arr[8]}

}

sorting

**3**.read -p "enter the number:" num

declare -a arr

function primefactor() {

for ((i=2;i<=num;i++))

do

if [ $((num%$i)) == 0 ]

then

echo "$i"

num=$((num/$i))

arr[$i]=$num

fi

done

echo ${arr[@]}

}

primefactor

**5.**read -p " enter the number: " a

a=11

declare -a arr

function repeattwicenumber() {

for ((i=1;i<=9;i++))

do

x=`expr $a \\* $i`

echo $x

arr[$i]=$repeattwicenumber

done

echo ${arr[@]}

}

repeattwicenumber