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**SE(4A) | 19F-0916**

Operating System Lab

Shell Scripting 3

**TASK # 1**

**#TASK 1**

**declare -A arr1 #Used to take array from user**

**read -p 'Enter an Array :' arr1**

**declare -A check1 #Used for checking values**

**max\_occ1=0 #Used for taking maximum occuring value**

**temp1=0; #Used to take each element for comapring**

**val1=0; #Used to know the actual value which is occuring most**

**A picture containing text, screenshot, computer, indoor

Description automatically generatedfor i1 in ${arr1[@]}**

**do**

**((check1[$i1]++))**

**temp1=${check1[$i1]}**

**if [ $max\_occ1 -lt $temp1 ]**

**then**

**val1=$i1**

**max\_occ1=$temp1**

**fi**

**done;**

**echo Most Occuring Value from Array is :$val1 which occurs :$max\_occ1 times!**

**TASK # 2**

**#TASK 2**

**arr2=(1 2 3 4 5 6 7 8 9 5 3 1)**

**temp2=0; #Used to take each element for comparing**

**val2=0; #Used to know the actual value which is occurring most**

**i2=0; #Used as a iterative variable**

**size2=${#arr2[@]} #Used to take size of array**

**A picture containing text, indoor, computer, computer

Description automatically generatedwhile [ $i2 -lt $size2 ]**

**do**

**temp2=${arr2[$i2]}**

**if [[ $val2 < $temp2 ]]**

**then**

**val2=$temp2**

**fi**

**i2=$(( $i2 + 1 ))**

**done;**

**echo Greatest from Array is :$val2**

**TASK # 3**

**#TASK 3**

**declare -A arr3 #Used to take array from user**

**read -p 'Enter an Array :' arr3**

**declare -a Splited #Used for checking values**

**temp3=0; #Used to take each element for comparing**

**A picture containing text, indoor, computer, computer

Description automatically generatedsize3=${#arr3[@]} #Used to take size of array**

**for i3 in ${arr3[@]}**

**do**

**temp3=$i3**

**if [[ 0 == $temp3 ]]**

**then**

**Splited=("0" ${Splited[@]})**

**elif [[ 1 == $temp3 ]]**

**then**

**Splited+=($temp3)**

**else**

**echo Array contains elements other than 1 and 0 So, Bye byeee**

**break**

**fi**

**done;**

**echo After Seperation, Array is :${Splited[@]}**

**TASK # 4**

**#TASK 4**

**arr4=(0 1 2 3 1 2 4 5)**

**temp4=0; #Used to take each element for comapring**

**set4=1 #Use for indexing of inner array**

**check4=0; #Used for authencating either repeating value found or not**

**for i4 in ${arr4[@]}**

**do**

**temp4=$i4**

**for j4 in ${arr4[@]:$set4}**

**do**

**if [[ $temp4 == $j4 ]]**

**then**

**echo First Repeating Value is : $i4**

**check4=1**

**break**

**else**

**check4=0**

**fi**

**done;**

**set4=$(( $set4 + 1 ))**

**if [ $check4 -eq 1 ]**

**then**

**break**

**fi**

**done;**

**if [ $check4 -eq 0 ]**

**then**

**echo There is no Repeating value in array**

**fi**

**A computer screen shot

Description automatically generated with low confidence**

**OVERALL SCRIPT**

**#!/bin/bash**

**#TASK 1**

**declare -A arr1 #Used to take array from user**

**read -p 'Enter an Array :' arr1**

**declare -A check1 #Used for checking values**

**max\_occ1=0 #Used for taking maximum occuring value**

**temp1=0; #Used to take each element for comapring**

**val1=0; #Used to know the actual value which is occuring most**

**for i1 in ${arr1[@]}**

**do**

**((check1[$i1]++))**

**temp1=${check1[$i1]}**

**if [ $max\_occ1 -lt $temp1 ]**

**then**

**val1=$i1**

**max\_occ1=$temp1**

**fi**

**done;**

**echo Most Occuring Value from Array is :$val1 which occurs :$max\_occ1 times!**

**#TASK 2**

**arr2=(1 2 3 4 5 6 7 8 9 5 3 1)**

**temp2=0; #Used to take each element for comapring**

**val2=0; #Used to know the actual value which is occuring most**

**i2=0; #Used as a iterative variable**

**size2=${#arr2[@]} #Used to take size of array**

**while [ $i2 -lt $size2 ]**

**do**

**temp2=${arr2[$i2]}**

**if [[ $val2 < $temp2 ]]**

**then**

**val2=$temp2**

**fi**

**i2=$(( $i2 + 1 ))**

**done;**

**echo Greatest from Array is :$val2**

**#TASK 3**

**declare -A arr3 #Used to take array from user**

**read -p 'Enter an Array :' arr3**

**declare -a Splited #Used for checking values**

**temp3=0; #Used to take each element for comapring**

**size3=${#arr3[@]} #Used to take size of array**

**for i3 in ${arr3[@]}**

**do**

**temp3=$i3**

**if [[ 0 == $temp3 ]]**

**then**

**Splited=("0" ${Splited[@]})**

**elif [[ 1 == $temp3 ]]**

**then**

**Splited+=($temp3)**

**else**

**echo Array contains elements other than 1 and 0 So, Bye byeee**

**break**

**fi**

**done;**

**echo After Seperation, Array is :${Splited[@]}**

**#TASK 4**

**arr4=(0 1 2 3 1 2 4 5)**

**temp4=0; #Used to take each element for comapring**

**set4=1 #Use for indexing of inner array**

**check4=0; #Used for authencating either repeating value found or not**

**for i4 in ${arr4[@]}**

**do**

**temp4=$i4**

**for j4 in ${arr4[@]:$set4}**

**do**

**if [[ $temp4 == $j4 ]]**

**then**

**echo First Repeating Value is : $i4**

**check4=1**

**break**

**else**

**check4=0**

**fi**

**done;**

**set4=$(( $set4 + 1 ))**

**if [ $check4 -eq 1 ]**

**then**

**break**

**fi**

**done;**

**if [ $check4 -eq 0 ]**

**then**

**echo There is no Repeating value in array**

**A picture containing text, computer, indoor, screenshot

Description automatically generated fi**