#!/bin/bash

# Function to sort an array in ascending order

sortArray() {

local array=("$@")

local n=${#array[@]}

for ((i = 0; i < n-1; i++)); do

for ((j = 0; j < n-i-1; j++)); do

if [[ ${array[j]} -gt ${array[j+1]} ]]; then

# Swap elements if they are in the wrong order

temp=${array[j]}

array[j]=${array[j+1]}

array[j+1]=$temp

fi

done

done

# Print the sorted array

echo "Sorted Array in Ascending Order: ${array[@]}"

}

# Read array elements from the user

echo "Enter array elements (separated by spaces):"

read -a inputArray

# Call the function to sort and print the array

sortArray "${inputArray[@]}"

#!/bin/bash

read -p "Enter string: " string

len=${#string}

for (( i=$len-1; i>=0; i-- ))

do

# "${string:$i:1}"extract single single character from string.

reverse="$reverse${string:$i:1}"

done

echo "Reversed string: $reverse"

#!/bin/bash

echo "Enter a String"

read input

reverse=""

len=${#input}

for (( i=$len-1; i>=0; i-- ))

do

reverse="$reverse${input:$i:1}"

done

if [ $input == $reverse ]

then

echo "$input is a palindrome"

else

echo "$input is not a palindrome"

fi

echo "Enter the 1st number"

read n1

echo "Enter the 2nd number"

read n2

echo "Menu:"

echo "1)Addition"

echo "2)Subtraction"

echo "3)Multiplication"

echo "4)Division"

echo "Enter the choice"

read ch

case $ch in

1) echo "Addition is: $((n1+n2))";;

2) echo "Subtraction is: $((n1-n2))";;

3) echo "Multiplication is: $((n1\*n2))";;

4) echo "Division is: $((n1/n2))";;

\*) echo "Enter valid choice";;

esac

read -p "Enter a filename: " filename

if [ -e "$filename" ]; then

echo "File '$filename' exists."

# Check file type

if [ -f "$filename" ]; then

echo "It's a regular file."

elif [ -d "$filename" ]; then

echo "It's a directory."

else

echo "It's a different type of file."

fi

# Check file permissions

permissions=$(ls -l "$filename")

echo "File permissions: $permissions"

else

echo "File '$filename' does not exist."

fi

#!/bin/bash

# Define a function to calculate factorial

calculate\_factorial() {

local num=$1

local result=1

for ((i=1; i<=$num; i++)); do

result=$((result \* i))

done

echo $result

}

read -p "Enter a number: " number

if [ $number -lt 0 ]; then

echo "Factorial is not defined for negative numbers."

else

factorial=$(calculate\_factorial $number)

echo "Factorial of $number is $factorial."

fi

#!/bin/bash

read -p "Enter the path to the file: " file\_path

# Check if the file exists

if [ -e "$file\_path" ]; then

# Get file type

file\_type=$(file -b "$file\_path")

# Get file permissions

permissions=$(stat -c %A "$file\_path")

echo "File type: $file\_type"

echo "Permissions: $permissions"

else

echo "File not found at path: $file\_path"

fi

#!/bin/bash

read -p "Enter a number: " number

reversed=0

while [ $number -gt 0 ]; do

remainder=$((number % 10))

reversed=$((reversed \* 10 + remainder))

number=$((number / 10))

done

echo "Reversed number: $reversed"