BASIC CALCULATOR WITH BASH SCRIPT

Step 1-) create file

Nano my_calculator.sh

Step 2-) Code

```
#!/bin/bash
# Function to calculate factorial
function factorial {
  if (( $1 <= 1 )); then
    echo 1
  else
    echo $(( $1 * $(factorial $(( $1 - 1 ))) ))
  fi
}
# Function to perform basic arithmetic operations
function calculate {
  local operand=$1
  local num1=$2
  local num2=$3

  case "$operand" in
    +)
      echo $((num1 + num2))
      ;;
    -)
      echo $((num1 - num2))
      ;;
    \*)
      echo $((num1 * num2))
      ;;
```

```
    /)
      echo "scale=2; $num1 / $num2" | bc
      ;;
    %)
      echo $((num1 % num2))
      ;;
    !)
      echo $(factorial $num1)
      ;;
    *)
      echo "Invalid operand: $operand"
      exit 1
      ;;
  esac
}
# Main script
echo "Available operations:"
echo "+ (addition)"
echo "- (subtraction)"
echo "* (multiplication)"
echo "/ (division)"
echo "% (modulo)"
echo "! (factorial)"
read -p "Enter the operation (+, -, *, /, %, !): " operation
case "$operation" in
  +|\*|/|%)
    read -p "Enter the first number: " num1
    read -p "Enter the second number: " num2
    result=$(calculate "$operation" $num1 $num2)
```

```
    echo "Result: $result"
    ;;
  !)
    read -p "Enter a number to calculate its factorial: " num
    result=$(factorial $num)
    echo "Result: $result"
    ;;
  -)
    echo "Subtraction is not supported in this version."
    ;;
  *)
    echo "Invalid operation: $operation"
    exit 1
    ;;
esac
```

Step 3-) chmod +x calculator.sh

Step 4-) run -> ./calculator.sh