#!/bin/bash

while true; do

echo "1. Additon"

echo "2. Subtraction"

echo "3. Multiplication"

echo "4. Division"

echo "5. Power"

echo "6. Factorial"

echo "7. GCD"

echo "8. LCM"

echo "9. Exit"

echo "-------------------"

read -p "Enter your choice: " choice

case "$choice" in

1|2|3|4|5|7|8)

read -p "Enter n1: " n1

read -p "Enter n2: " n2

gcd=$n1

b=$n2

while [[ $b != 0 ]]; do

temp=$b

b=$((gcd % b))

gcd=$temp

done

lcm=$(( ($n1 \* $n2) / $gcd ))

case "$choice" in

1) echo "$n1 + $n2 = $(($n1 + $n2))" ;;

2) echo "$n1 - $n2 = $(($n1 - $n2))" ;;

3) echo "$n1 \* $n2 = $(($n1 \* $n2))" ;;

4) echo "$n1 / $n2 = $(($n1 / $n2))" ;;

5) echo "$n1 ^ $n2 = $(($n1 \*\* $n2))" ;;

7) echo "GCD of $n1 & $n2 = $gcd" ;;

8) echo "LCM of $n1 & $n2 = $lcm" ;;

esac

;;

6)

read -p "Enter number: " num

fact=1

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

fact=$((fact \* i));

done

echo "$num! = $fact"

;;

9) exit 0 ;;

\*) echo "Invalid choice! Try again" ;;

esac

done

**Output:**

1. Additon

2. Subtraction

3. Multiplication

4. Division

5. Power

6. Factorial

7. GCD

8. LCM

9. Exit

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Enter your choice: 1

Enter n1: 6

Enter n2: 4

6 + 4 = 10

1. Additon

2. Subtraction

3. Multiplication

4. Division

5. Power

6. Factorial

7. GCD

8. LCM

9. Exit

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Enter your choice: 2

Enter n1: 58

Enter n2: 34

58 - 34 = 24

1. Additon

2. Subtraction

3. Multiplication

4. Division

5. Power

6. Factorial

7. GCD

8. LCM

9. Exit

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Enter your choice: 3

Enter n1: 6

Enter n2: 4

6 \* 4 = 24

1. Additon

2. Subtraction

3. Multiplication

4. Division

5. Power

6. Factorial

7. GCD

8. LCM

9. Exit

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Enter your choice: 4

Enter n1: 45

Enter n2: 9

45 / 9 = 5

1. Additon

2. Subtraction

3. Multiplication

4. Division

5. Power

6. Factorial

7. GCD

8. LCM

9. Exit

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Enter your choice: 5

Enter n1: 2

Enter n2: 3

2 ^ 3 = 8