**SIMPLE R CALCULATOR – TESTS**

Megan McDonnell, 10354513

May 13th, 2016

LINK TO GITHUB RESPOSITRY: <https://github.com/megnicd/programming-for-big-data_CA05>

CONTENTS

[Testing add function 2](#_Toc482464831)

[Testing subtract function 2](#_Toc482464832)

[Testing multiply function 3](#_Toc482464833)

[Testing divide function 3](#_Toc482464834)

[Testing divide function with zero error 4](#_Toc482464835)

[Testing exponentiate function 4](#_Toc482464836)

[Testing factorial function 5](#_Toc482464837)

[Testing cos function 5](#_Toc482464838)

[Testing sin function 6](#_Toc482464839)

[Testing tan function for undefined 6](#_Toc482464840)

[Testing tan function 7](#_Toc482464841)

[Testing square root function 7](#_Toc482464842)

[Testing for bad input 8](#_Toc482464843)

## Testing add function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 1

Enter first number: 2.5

Enter second number: 8

[1] "2.5 + 8 = 10.5"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing subtract function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 2

Enter first number: 1000

Enter second number: 250

[1] "1000 - 250 = 750"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing multiply function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 3

Enter first number: 5

Enter second number: 7

[1] "5 \* 7 = 35"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing divide function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 4

Enter first number: 4

Enter second number: 4

[1] "4 / 4 = 1"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing divide function with zero error

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 4

Enter first number: 6

Enter second number: 0

[1] "6 / 0 = Error, dividing by zero equals zero"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing exponentiate function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 5

Enter first number: 2

Enter second number: 8

[1] "2 \*\* 8 = 256"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing factorial function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 6

Enter number: 5

[1] "5 ! = 120"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing cos function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 7

Enter number: 75

[1] "75 cos = 0.258819045102521"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing sin function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 8

Enter number: 90

[1] "90 sin = 1"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing tan function for undefined

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 9

Enter number: 90

[1] "90 tan = Undefined"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing tan function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 9

Enter number: 49

[1] "49 tan = 1.15036840722101"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing square root function

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 10

Enter number: 100

[1] "100 sqrt = 10"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."

## Testing for bad input

[1] "Please select an operator: "

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "1. Add"

[1] "2. Subtract"

[1] "3. Multiply"

[1] "4. Divide"

[1] "5. Exponentiate"

[1] "6. Factorial"

[1] "7. Cos"

[1] "8. Sin"

[1] "9. Tan"

[1] "10. Sqrt"

[1] "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

[1] "Note that choices 1-5 will require two numerical inputs, while choices 6-10 will only require one."

Enter choice[1/2/3/4/5/6/7/8/9/10]: 11

[1] "Invalid input"

[1] "If you would like to perform another calculation, hit Ctrl, Shift & S."