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Welcome to 60 seconds to code where I show you how to code in 60 seconds or less.

Today you will learn about recursion via multiplication. Remember that multiplication is simply repeated addition. A recursive function is a function that calls itself by reducing the problem to a smaller problem and then combining the results of all recursive calls to form a solution.

Step 1- Create a file called recursion.py and in line 1 define a function called recursive multiplication with two arguments; the multiplicand and the multiplier.

Step 2 – In line 2 write the condition when this function will stop calling itself. This is also called the base case which is if multiplier equals 1 then return the multiplicand.

Step 3 – In line 4, write the else condition. This condition is also called the recursive case and this will divide the problem in to a smaller problem. You have to add the multiplicand and reduce the multiplier by 1 each time.

Step 4 – In line 6, type print(recur\_mult(25,10)) and set a breakpoint on line 6.

Step 5 – Debug the file and watch the code executing and returning until the base case is reached.

Step 6 – Change print(recur\_mult(25,10)) to print(recur\_mult(25,0)) and run the file again. What happens? How would you fix this bug?

The code is available in a link in the description.

Congratulations, you have learned about recursion. For your homework, write a recursive division function. Division is just repeated subtraction. Remember to handle the division by 0 case and try to code a little every day because code is life.

Learn #recursion using simple multiplication in #python #100DaysOfCode #301DaysofCode #60secondstocode

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