

exercise

May 28, 2024

Exercise

Write a program to calculate the factorial of a positive integer input by the user. Recall that the factorial function is given by $x! = x(x-1)(x-2)\dots(2)(1)$ so that $1! = 1$, $2! = 2$, $3! = 6$, $4! = 24$, ...

- Write the factorial function using a Python while loop.
- Write the factorial function using a Python for loop.

Check your programs to make sure they work for 1, 2, 3, 5, and beyond, but especially for the first 5 integers.

Exercise

The above defined function delivers a false value at a certain point. Find the error and correct the function appropriately.

Exercise: Create a script which generates a variable number of Brownian particles and plots the trajectories.