## Topics in Applied Mathematics Exercise

## Hwijae Son

## October 8, 2024

- 1. Add a method that cancels one click to the counter class.
- 2. Implement a Counter class that only allows a limited number of people. If the limit is exceeded, it should print 'Entry restricted' and terminate. The number limit should be set as a default or be input when the class is instantiated.
- 3. Implement a class where User A and User B each roll a die, compare the results, and print 'win,' 'lose,' or 'draw' based on the comparison.
- 4. Write a calculator program that provides basic arithmetic operations. Initialize the value to 0 and add methods to perform addition, subtraction, multiplication, and division, along with a reset method.
- 5. Implement a better\_calculator class that inherits from the calculator in problem 4 and adds a method to support exponentiation operations.
- 6. Implement a calculator class that inherits from the calculator in problem 4, overriding the division method so that when dividing by zero, it returns 0 instead of raising a ZeroDivisionError.