Assignment 2

1. Write a Python program to compute the probability that at least three people share a birthday in a group of 25 individuals, assuming 365 possible birthdays. Implement both:
    a. <u>Analytical Approach</u> using probability formulas.
    b. <u>Monte Carlo Simulation</u> by randomly assigning birthdays and estimating the probability. Compare the results from both methods.

2. Write a Python program to simulate for 1000 times estimate the average number of people needed to be in the room to observe all 365 birthdays.

<u>Note that</u> you have to create a *class* to solve this problem. So that, you can play with the numbers at the time of viva and be able to show the comparison.