

Practical 13: Arrays

Task 1

Do you know what is the most probable outcome (2, 3, 4, ..., 12) when you throw 2 dice? This is useful information when you are playing games involving a pair of dice.

Use the `Die` class that was given to you recently in order to simulate throwing two dice 10,000 times in order to find the most frequent (and therefore most probable) outcome that the pair of dice can produce. Note that by outcome here we mean the sum of the outcome of each individual die. For example a roll of 3 and 2 produces the same outcome as a roll of 4 and 1, i.e. 5.

You are expected to make use of an array in the above program. HINT: Your array should be used to store the count (occurrence) of every possible outcome with two dice.

Your program should print out the contents of the above array (i.e. the occurrence of all possible outcomes with two dice in 10,000 rolls) and below that it should also display the most likely outcome (i.e. the outcome that came up most times).

Task 2

With small changes to your program (following the same program structure) you can now simulate throwing **three** dice 10,000 times. What is the most probable outcome in this case?

You may have to run your program a few times to establish that.