

EPFL CIVIL-127, Lab 2

February 24, 2026

This week, continue working in the same CIVIL-127 folder as last week. Create a subfolder called lab2.

2.1

- Write a program to find the average number of dice rolls needed for a game of Snakes & Ladders. How do we answer this question?
 1. Simulate one game
 2. Repeat many many times
 3. Compute the average

Note: This process is called a Monte Carlo simulation and gives an approximate answer
- The rules of Snakes & Ladders are:
 - You start with your marker on 1
 - You move your marker by rolling a regular 6-sided dice
 - If your marker lands at the mouth of a snake, your marker goes down
 - If your marker lands at the bottom of a ladder, your marker goes up
 - The game ends when you land exactly on 100. E.g. if you are on 97 and roll a 4, you bounce back on 99
- Use this board:



Where the snakes are at positions:

- 43 → 17, 50 → 5, 56 → 8, 73 → 15, 84 → 63, 87 → 49, 98 → 40

And the ladders are at positions:

- 2 → 23, 6 → 45, 20 → 59, 52 → 72, 57 → 96, 71 → 92

2.2

- Was your number guessing game from lab 1 buggy because you were comparing strings (you can test by having the first player pick 88 and the second player guess 9)? If yes, fix your code so you are comparing numbers.
- Re-implement your guessing game. Make it a single player game. The computer picks a number between 1 and 100. The player tries to guess the number and is told if their guess is correct, too low, or too high.