

## Backend Technical Assignment

A pawn can move on 10x10 chequerboard horizontally, vertically and diagonally by these rules:

1. 3 tiles moving North (N), West (W), South (S) and East (E)
2. 2 tiles moving NE, SE, SW and NW
3. Moves are only allowed if the ending tile exists on the board
4. Starting from initial position, the pawn can visit each cell only once

On the following picture, you can see the initial position in black, the legal next positions in dark grey and the illegal ones in red.

	0	1	2	3	4	5	6	7	8	9
0			N							
1	NW				NE					
2										
3	W					E				
4										
5	SW				SE					
6			S							
7										
8										
9										

Write a program that finds at least one path for the pawn to visit all tiles on the board following the above rules, starting from any tile.

- Use the language/technology of your choice but Ruby on Rails is the main language, so consider it as a preferred choice.
- Add notes to describe your approach and/or anything else to clarify the reasoning that led you to the solution.
- Add instructions to run your program.
- Add all the relevant files (code, instructions and notes, no binaries!) to a compressed folder and use the following convention <surname>-<name>\_platform-assignment-<test\_number>.<ext> using lower case. Es. John Doe, submitting a solution for this test

assignment (the number is in the title) in tgz format, would send doe-john\_platform-Assignment-2.tgz

- Approach this task as if you would be already an employee at Truecaller and this would be part of a real project which will go live to our users. The assignment is an important part of our recruitment process and the evaluation of the output will determine if you will move forward for the next stages in the process.

Evaluation criteria:

- Solution - ability to solve the problem and performance of the solution
- Application of language and/or technology
- Structure of the project
- Code quality/clean code

We sincerely hope to see you as part of our team.

The TC Engineering Team