

# Zombie Apocalypse v3.5

=====

## Instruction

- Please read the problem description thoroughly then create a program to solve the problem.
- For the solution, we prefer you to use Java, Ruby, C#, C++, or Javascript. External libraries and frameworks may be used with solid reasons and explanations, although it is not recommended.
- There is no requirement in visualising this in any way (as in - no UI needed). However you are welcome to create one if you wish.
- Please include a brief explanation of your design and assumptions along with your code, as well as an instructions on how to run your application.
- Your application must compile, run, and generate the correct result according to your assumption.
- Please compress your files into a single .zip file for submission. Please do NOT include compiled code or executables.
- As a general rule, we allow **3 days** from the date that you receive these instructions to submit your code, but you may request more time if needed.

Through this exercise, we assess a number of things including the design aspect of your solution and your object oriented programming skills. While these are small problems, we expect you to submit what you believe is production-quality code - code that you'd be able to run, maintain, and evolve.

## Problem Description

After the nuclear war, a strange and deadly virus has infected the planet. Living creatures are becoming zombies that spread their zombiness by an unfriendly bite. So, in an area of  $N \times N$ , a **zombie** awakes. Top left corner is assumed to be (0,0) with x represent horizontal coordinate, y represent vertical coordinate.

The zombie can move within the area and can move up, down, left and right (U,D,L,R) - a sequence of such moves forms a zombie path, for example: DLUURR.

There are also poor **creatures** within the area that can become zombie's victims. Their position is defined with a pair of coordinates (x,y). The creatures are aware of zombie presence, but are so frightened that they never move.

If a zombie moves so that it ends up on the same location as a poor creature, the creature transforms into another zombie and the **zombies** score 1 point. After the zombie finishes all his moves, the newborn zombie starts moving with the same pattern the original zombie moves. That is, following the above example, the new zombie will move DLUURR starting from the place where it was born.

**Your task is to program to take an input txt file about the zombie game, and output the result in any format:**

<p>Given a file that contains:</p> <ul style="list-style-type: none"><li>• dimensions of the area (N)</li><li>• initial position of the zombie</li><li>• a list of positions of poor creatures</li><li>• and a list of moves zombies will make</li></ul> <p>The program should output (print to console, or to text, or display in UI etc.)</p> <ul style="list-style-type: none"><li>• the number of points scored by the zombies</li><li>• the final position of the zombies</li></ul>	<p>Example input:</p> <pre>4 2 1 0 1,1 2,3 1 DLUURR</pre> <p>Example output if you have assumption that zombie cannot move when they hit a wall:</p> <pre>zombies score: 2 zombies positions: 3 0,2 1,2 0</pre> <p>Example output if you have assumption that zombie can tunnel through the wall to the other side:</p> <pre>zombies score: 3 zombies positions: 3 0,2 1,1 0,0 0</pre>
--	--

This exercise is open-ended with various assumptions you may come up with. However there must be a way to supply the application with the input data in the format of the above example.