Developer Assignment

Task

Read the ‘Problem’ definition on the nextpage.

Submit your code for your solution, as well as an answer to the question.

The timeframe for this will be up to you, but try to keep to using only about 4 hours of work in total.

The result should be delivered as a zipped archive (zip or tar.gz) containing all of the code and your answer. You can deliver this to your HR contact at KidsLoop who will pass it on to the development team.

There will be a follow-up interview where you can explain your solution to the KidsLoop engineers in a little more detail.

Any further questions can be sent to the HR department at KidsLoop who will pass your question onto the development team as required.

Problem

There is a robot which can move around on a grid. The robot is placed at point (0,0). From (x, y) the robot can move to (x+1, y), (x-1, y), (x, y+1), and (x, y-1). Some points are dangerous and contain EMP Mines. To know which points are safe, we check whether the sum digits of abs(x) plus the sum of the digits of abs(y) are less than or equal to 23. For example, the point (59, 75) is not safe because 5 + 9 + 7 + 5 = 26, which is greater than 23. The point (-51, -7) is safe because 5 + 1 + 7 = 13, which is less than 23.

How large is the area that the robot can access?

What we will look at

- Structure and style of the code
- Issues or bugs in the code
- Efficiency of the code
- How well you can explain your setup
- Your problem-solving skills

Thank you.