The Given 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?

My Solution Explanation

To solve this problem I first started with the initial coordinate which is (0, 0). Starting from the initial coordinate I first checked if a coordinate is mine safe or not using the given threshold (23). I made a function called **Visited_Before()** to keep track of all the previously visited coordinates. To find the total number of the safe coordinate blocks I used the stack concept in **Python3**. Since our robot is allowed to move UP, DOWN, LEFT, and RIGHT so I pushed all these possible combinations onto my stack and popped out of the stack while maintaining a loop.

My final answer for the total number of safe blocks is: **592597**