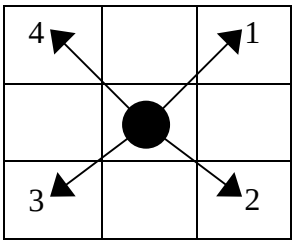
Problem 1

Horse Step Maze

Computer mouse searches maze that has been developed for a long times, and the competition of computer mouse racing maze is hold in many different area and country. Our problem is to design a program of horse step maze that simulate a computer mouse to search maze, but its racing rules are different from the conventional rules. It just permits the computer mouse to walk the maze with horse step. You must design a data structure to represent the architecture of maze. Generally, you can use 1 to represent wall and 0 represent pathway that computer mouse can progress. If all four directions can't walk, then the computer mouse must go back to find the others directions. We suggest you use the data structure of stack. The size of maze is the checks of 15 by 15. Your program must have some functions as follow:

1. The starting point and ending point of maze can be set occasionally by the key of Up, Down, Left and Right of keyboard.
2. You must print the final results of searching maze if the mouse find the goal. The best method is to print the values of X axial and Y axial and display the path with monitor.
3. You must indicate failure if the path arrive at the goal is not exist.
4. The rule of searching maze is as follow:



● represents the location of computer mouse at present

⟶ represents the path that computer mouse can walk

The numbers of 1,2,3 and 4 represent the priority of four different directions. The path of East-North has the most priority, the path of East-South has secondary priority, and so on.

Input File

The size of maze is the checks of 15 by 15, and initial the starting point is at left-up corner and ending point is at right-down corner

Output File

The final output is a checks of 15 by 15 that can display the path of searching maze; otherwise, the values of X axial and Y axial must be printed in screen.

Sample Input

* represents starting point

*														
														#

represents ending point

Sample Output

starting point

*		*		*		*		*		*		*		*
	*		*		*		*		*		*		*	
														*
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ending point

all * represent the searching path of computer mouse when the starting point is at left-up corner.