import random

def GenerateMineSweeperMap(n, k):

arr = [[0 for row in range(n)] for column in range(n)]

for num in range(k):

x = random.randint(0,n-1)

y = random.randint(0,n-1)

arr[y][x] = 'X'

if (x >=0 and x <= n-2) and (y >= 0 and y <= n-1):

if arr[y][x+1] != 'X':

arr[y][x+1] += 1 # center right

if (x >=1 and x <= n-1) and (y >= 0 and y <= n-1):

if arr[y][x-1] != 'X':

arr[y][x-1] += 1 # center left

if (x >= 1 and x <= n-1) and (y >= 1 and y <= n-1):

if arr[y-1][x-1] != 'X':

arr[y-1][x-1] += 1 # top left

if (x >= 0 and x <= n-2) and (y >= 1 and y <= n-1):

if arr[y-1][x+1] != 'X':

arr[y-1][x+1] += 1 # top right

if (x >= 0 and x <= n-1) and (y >= 1 and y <= n-1):

if arr[y-1][x] != 'X':

arr[y-1][x] += 1 # top center

if (x >=0 and x <= n-2) and (y >= 0 and y <= n-2):

if arr[y+1][x+1] != 'X':

arr[y+1][x+1] += 1 # bottom right

if (x >= 1 and x <= n-1) and (y >= 0 and y <= n-2):

if arr[y+1][x-1] != 'X':

arr[y+1][x-1] += 1 # bottom left

if (x >= 0 and x <= n-1) and (y >= 0 and y <= n-2):

if arr[y+1][x] != 'X':

arr[y+1][x] += 1 # bottom center

return arr

def GeneratePlayerMap(n):

arr = [['-' for row in range(n)] for column in range(n)]

return arr

def DisplayMap(map):

for row in map:

print(" ".join(str(cell) for cell in row))

print("")

def CheckWon(map):

for row in map:

for cell in row:

if cell == '-':

return False

return True

def CheckContinueGame(score):

print("Your score: ", score)

isContinue = input("Do you want to try again? (y/n) :")

if isContinue == 'n':

return False

return True

def Game():

GameStatus = True

while GameStatus:

difficulty = input("Select your difficulty (b, i, h):")

if difficulty.lower() == 'b':

n = 5

k = 3

elif difficulty.lower() == 'i':

n = 6

k = 8

else:

n = 8

k = 20

minesweeper\_map = GenerateMineSweeperMap(n, k)

player\_map = GeneratePlayerMap(n)

score = 0

while True:

if CheckWon(player\_map) == False:

print("Enter your cell you want to open :")

x = input("X (1 to 5) :")

y = input("Y (1 to 5) :")

x = int(x) - 1

y = int(y) - 1

if (minesweeper\_map[y][x] == 'X'):

print("Game Over!")

DisplayMap(minesweeper\_map)

GameStatus = CheckContinueGame(score)

break

else:

player\_map[y][x] = minesweeper\_map[y][x]

DisplayMap(player\_map)

score += 1

else:

DisplayMap(player\_map)

print("You have Won!")

GameStatus = CheckContinueGame(score)

break

# Start of Program

if \_\_name\_\_ == "\_\_main\_\_":

try:

Game()

except KeyboardInterrupt:

print('\nEnd of Game. Bye Bye!')