Random Walks

Consider the code provided on the course web. It implements the classes necessary to implement random walks. You are asked to complete the following two tasks:

**Task 1**

Complete the following Walker class such that this walker takes one of the following 4 2d steps with equal probability (1,0), (-1,0), (0,1.1), (0,-0.9)

```python
class WalkerUp(Walker):
    def __init__(self, name):
        Walker.__init__(self, name)

    def step(self):
        return Walker.step(self)
```

**Task 2**

Complete the following class that implements traps. When a walker reaches a trap it is magically transported to a random location.

```python
class FieldWithTraps(Field):
    def __init__(self, w, h, num_traps):
        Field.__init__(self)

    def reset(self):
        Field.reset(self)

    def move(self, walker):
        Field.move(self, walker)
```

Here \( w \) and \( h \) defines the width and the height of the region where traps are located.

**Code**

Available on the course website.
Submission

The exercise will be completed in class, and you do not need to submit anything. **Be prepared to show your work to the instructor.**