## Code in Place 2021 – Lessons

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## Q4: Cleanup Karel, Milestone 2

Karel has a bit of spring cleaning to do! Karel's world will have beepers in some positions in the bottom row; write a program to have Karel walk across the bottom row and, at each position, pick up a beeper only if one is present. Notice that you've already written the code to check if a beeper is present and only pick up a beeper if one is there from the previous milestone -- you should use your code from the previous milestone as a helper function to help with the decomposition of this problem!

Additionally, note that *Karel's starting position will never contain a beeper*, so there's no need to check it.

For example, if this is the initial starting world, with some beepers in the first row:

This should be the end result, with a clear bottom row:

We've provided you two worlds on which to test your code. You can toggle between them by changing the very last line in the file from run\_karel\_program('Cleanup1.w') to run\_karel\_program('Cleanup2.w') (and vice versa) -- you will likely need to press Run (it's fine if you do so without any code written) for the world change to take effect.

## CleanupKarel.py

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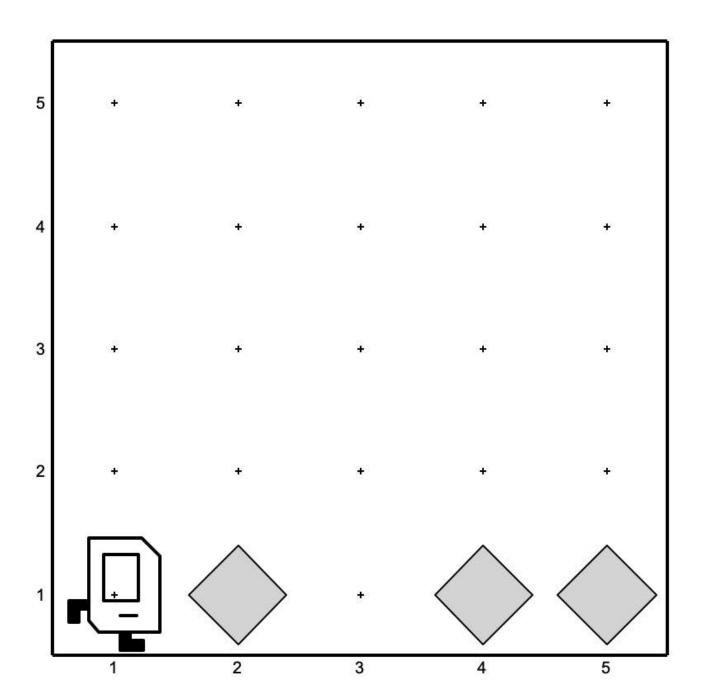
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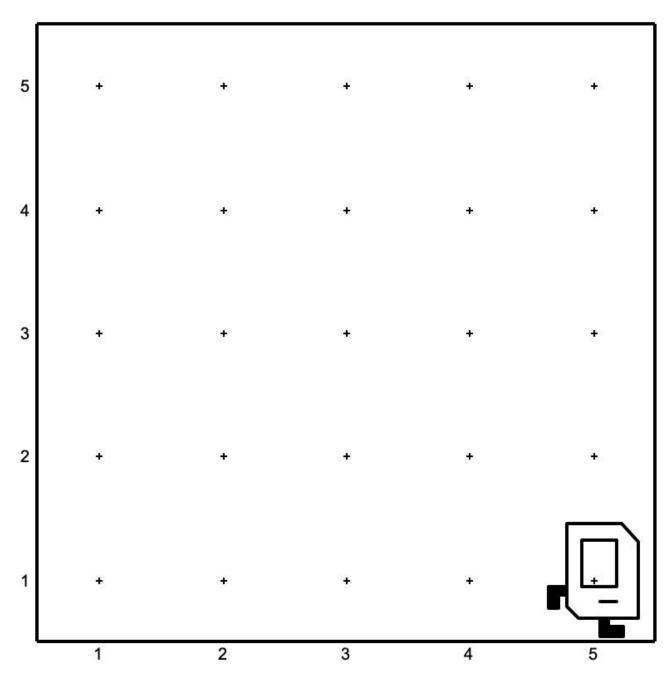
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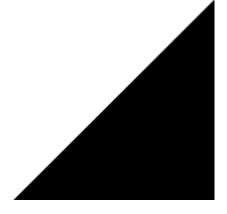
from karel.stanfordkarel import \*  $\,$ 



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File: CleanupKarel.py

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When you finish writing this file, CleanupKarel should be able to pick up all beepers from the first row of any sized world and end in the bottom right corner facing East.



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def main():

...."

 $\cdots$  You should write your code to make Karel do its task in

····this function. Make sure to delete the 'pass' line before



····starting to write your own code. You should also delete this





Karel

X



