

For Friday

- Read Becker, chapter 5, section 6
- Recommended practice problems:
 - Chapter 5, problems 2-6

Program 3

- Any questions?

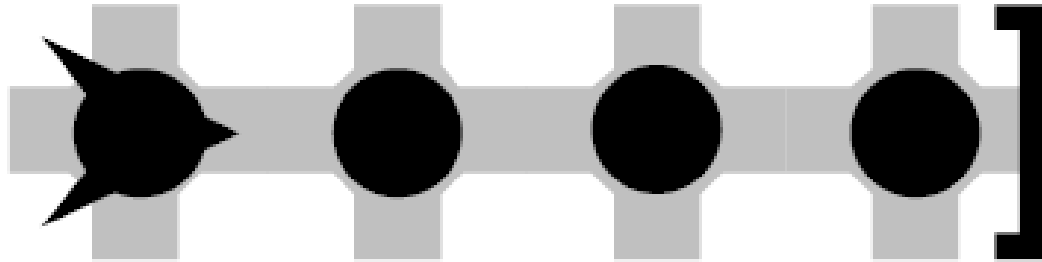
Overloading

- What's the concept?

Practice

- Overload pickThing to take a parameter specifying how many things to pick up.

The Fencepost Problem



- How we would solve this problem?
- Why do we call it a fencepost problem?

Loop and a half

- Sometimes we need to do one part of a loop more often than the rest of it.
- The extra part may go before the loop or after, depending on the problem.

Constructing a While Loop

- What are the 4 steps to constructing a good while loop?

Practice

- Write code to have karel put a Thing down on every spot along the north wall of an enclosed room. karel begins in the northwest corner of the room.

Problem

- Write a method to move a robot to the end of a wall.



Initial Situation



Final Situation

Temporary Variables

- Commonly called local variables
- Occur inside a method
- Store a value until the end of the method
- Must be given an initial value (i.e. they are not automatically given any value)

Finding the End of a Wall Again

- Works better if we can write a predicate `rightsBlocked()`.
- Let's write it.

Using Temporary Variables

- Declaration
- Initialization
- Using the value
- Modifying the value

More Practice

- Karel is standing facing a row of things. Pick them all up and then lay down exactly that many things in a row just beyond where they were (see board for clarification). You may not assume anything about the number of items in karel's pack to begin the process.

Tracing the Code

Try It Again

- Write a method to make a Robot go completely around the inside of a box created by walls.

Nesting Ifs

A Student Class

- `public double getGPA()`
- `public void setHonors(String honors)`

Switch Statement

Complex Conditions

Precedence

Example

- How can we get a robot to follow a maze until it reaches a particular intersection?

De Morgan's Law

Short-Circuit Evaluation

Counting Loops

- The for loop
- Just a short-hand for a particular kind of while loop

Try It Again

- Write a method to make a Robot go completely around the inside of a box created by walls.