

Project 1/Lab 3 notes

- Algorithm in documentation in project design/final stages
- Class variable initialization in design
- Arrays in UML
- Correlation
- UMLs on engineering paper

CS 2334: Project 2

Objectives:

- Sort objects based on multiple properties
- Search for objects with matching properties
- Use “generics” to safely define reusable methods
- Use sensor information to affect Finch behavior

Focus for Today

- Get started on project 2: you should completely understand what we are asking of you
- Demonstrations for project 1

Only when the above are done should you turn to any remaining pieces for project 1

Milestone 1: FinchAction Addition

- int priority: priority level for an action (we will use this for sorting purposes)

Milestone 2: New Child Classes

- FinchGuardedJog: spin wheels at specified velocity until an obstacle is detected
- FinchGuardedOrient: wait until the Finch is placed in a particular orientation
 - Up, down, upside down and level

Note: these classes do not have a notion of *duration*. How does this affect your class hierarchy?

Input Files: An Example

seek	19	JOG	1000	-10.0	-10.0
seek	10	GJOG	30.0	30.0	
seek	38	GJOG	30.0	30.0	
seek	27	JOG	500	20.0	-20.0
seek	5	ORIENT	level		

Milestone 3: FinchAction implements Comparable

- `compareTo()` should order by name and then by priority
- Specify Comparable implementation so that only FinchActions can be compared to other FinchActions

Milestone 4: Sorting

- FinchActionList supplies a sort() method
- Must use an adapted version the generic sort method provided in the book (listing 11.10)
 - Adaptation: use the generic form of the method declaration so that the array does not consist of any Comparable objects, but those of a specific type

Milestone 5: new FinchActionList constructor

- Takes as arguments an existing FinchActionList object and a string
- Returns a new FinchActionList object that contains only the FinchActions whose names match the string
- Use this to implement cleaner versions of FinchActionList.display() and FinchActionList.execute()

Deadlines

- October 1st: design
- October 8th: final version, including demonstration