CS 444 - Project 1 - Stage 5

purpose

* The purpose of this stage is to:
  * read about some other NXTRegulatedMotor methods in the leJOS API
  * design and write a leJOS application class that causes your robot from Project 1 - Stage 3 to move in a manner of the team's choice (but also making use of at least one "new" method from the NXTRegulatedMotor class)
  * demonstrate your resulting leJOS application class to the class, describing at least one of the "new" NXTRegulatedMotor methods that you used

program specifications for Project 1 - Stage 5

* LOOK OVER the methods of class NXTRegulatedMotor in the leJOS API -- we will be discussing more about motors and how to make use of methods such as these, BUT as a team, you should be able to select at least ONE of these methods NOT used in Moving1.java to try out.

* As a team, decide on a sequence of motor actions and write a leJOS application class Moving2.java that meets these specifications:
  * make sure you call the NXTRegulatedMotor methods forward, backward, and stop at LEAST one time each;
  * call at least one NXTRegulatedMotor method other than forward, backward, or stop in such a way that it has an observable effect when your application class is executed;
    * INCLUDE the names of this/these additional methods in the class's javadoc comment;
  * make at least TWO method calls (your choice) for EACH of your robot's two motors before your program is finished;
  * You can display as much or as little on your NXT display screen as you like.
    * Want to do more than just System.out.println? Check out the methods in lejos.nxt class LCD, whose methods also output to the NXT display screen.
  * You are welcome (but not required) to use Button.waitForAnyPress() to, ah, control WHEN your robot does what (as, essentially, we did in Moving1.java).
  * as always, make sure you include appropriate javadoc comments for the Moving2 class, its main method, and any other classes or methods you write
    * as always, the class javadoc comment should also include a @version line including the last modified date and an @author line including the name of all team members present during this stage
    * and, as always, the main method should include a @param line nothing that argument args is not used
  * (IF you write other methods within Moving2 -- friendly advice: note that they would need to be static to be able to be called within main -- then in such a method's javadoc comment,
include a @param line describing each parameter (if any) and include a @return line describing what the method returns (if it is not a void method).

* as always, follow the class indentation coding standards and other style-related coding standards
* Compile and link your class, and upload it to your robot (and of course debug your class as necessary) until you are satisfied that it is successfully meeting the above specifications.

program approval for Project 1 - Stage 5

* Write your team name on the NEXT list on the white board.
* I'll look over your source code to see if it meets the course style standards, and CHECK OFF when it does so (if it does not, you will be expected to modify it before proceeding).
* Once your class source code has been verified as meeting the course style standards, you'll SHOW me your running program on your robot, and I will CHECK OFF that I have seen it running;
* Once your robot's running program has been checked off as demonstrated to me, one of the team members should SUBMIT your resulting Moving2.java on nrs-labs using ~st10/444submit with a homework number of 15 (project 1, stage 5).
* Plan/practice your live program demonstration (see below).
* IF you are at this point, and ready for your live program demonstration, and other teams are still finishing Project 1 stages, ASK ME what your options are for what you should do next.
  * (Class time with the robots is too scarce for you to simply leave, unless the class session is almost over -- if you simply leave, you may lose some credit for this project stage.)

live program demonstrations to the class

* when all of the teams are done with Stage 5, EACH team will demonstrate their program running on their robot to the class,
* ...and EXPLAIN (one of) the additional method(s) from NXTRegulatedMotor that you used:
  * WHAT this method expects,
  * WHAT it does,
  * HOW you are using it in your Moving2 class,
  * and WHY you chose to use it.
  * (EACH team member should explain at least ONE of the above aspects, so that all participate in this short live demonstration.)
* NOTE that PART of your project grade for this stage is behaving professionally as an "audience" member as well as participating in your team's live demonstration! This means:
  * paying careful attention to the each demonstration
  * NOT talking during the demonstrations
  * NOT web surfing or doing work or etc. during the demonstrations

...and now you have completed STAGE 5 of PROJECT 1.