Assignments

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Settings for "Practice with Design (2015 Pair Assignment 3)"

Created by	Gail E. Kaiser
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Open	Oct 5, 2015 12:00 am
Due	Oct 13, 2015 11:55 pm
Accept Until	Oct 14, 2015 11:55 pm
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Student Submissions	Single Uploaded File only
Number of resubmissions allowed	Unlimited
Accept Resubmission Until	Oct 20, 2015 11:55 pm
Grade	Points (max 10.0)
Alert:	Yes
Honor pledge:	No

Assignment Instructions

Get together with the other member of your pair (not your entire team).

You should now be ready to design the laundry feature for Awesome Robots. Did you remember to include design among your tasks?

Use the noun/verb technique together with CRC cards to find potential classes, responsibilities and collaborators. Merge and split as needed. It is best to use real index cards, or pieces of paper approximately the size of index cards, to make sure you aren't including too much for a single class.

Then draw class diagrams describing the structural aspects of your design. It is ok to omit visibility and multiplicity. It is best to show the details of individual classes (attributes and operations) in one diagram with just that class, and use a separate diagram (here with just the class names for each class) to show the associations among classes. If the latter gets messy, then replicate the same class in multiple different diagrams where you show associations with different other classes. Just make sure all classes are associated with at least one other class, otherwise why would you need them? In general, the only attributes you need to show are those needed to "remember" state across multiple operations, e.g., to reference specific other associated objects.

Now draw sequence diagrams showing the behavioral aspects of your design, i.e., the run-time interactions among objects (instances of classes). There should be at least one sequence diagram for each use case. You only need to show the major interactions among and within classes. Make sure all the operations defined in the corresponding class diagrams are used, otherwise why would you need them?

Submit on courseworks (per pair) a document with the following contents:

page 1: Names and unis of both members of the pairs. This should be on a separate page, do not start the material for page 2 on the same page.

pages 2 to N: Write a header "CRC Cards" at the top of page 2. Then transcribe your set of CRC cards.

pages N+1 to M: Make sure to start on a new page. Write a header "Class Diagrams" at the top of page N+1. Then draw your Class Diagrams.

pages M+1 to Q: Start on a new page. Write a header "Sequence Diagrams" at the top of page M+1. Then draw your Sequence Diagrams.

Your document can be either MS Word, or equivalent (.doc), or Adobe pdf.

If you are satisfied with your work, this is all you need to do. If you are unsure about anything, still submit something by the original deadline. But then both members of the pair should go together to visit any of the IAs for help, and then resubmit up to one week later. Do not resubmit if you did not meet with an IA.

How do we know when we're done? When you are confident that your design is sufficient to implement all of the functionality in the "heavyweight" version of the laundry use cases, plus any additional functionality you might have added when you defined your tasks. The resulting application, when implemented, needs to fulfill the customer's requirements and be valuable for the customer's own customers.

Additional resources for assignment

Use Cases (1 KB; Oct 5, 2015 11:47 am)

Student view of the assignment "Practice with Design (2015 Pair Assignment 3)"