

**CS 6310 – Software Architecture & Design**  
**Assignment #2 [75 points]: Grocery Express Project – Peer Reviews (v1)**  
**Spring Term 2023 – Instructor: Mark Moss**

**Submission**

This assignment must be completed as an individual, not as part of a group.

**Scenario**

You are continuing your work as part of the architecture and development team for the Grocery Express Project. **In this phase, you will review some of the designs prepared by your classmates and provide feedback to them.**

**Disclaimer:** *This scenario has been developed solely for this course. Any similarities or differences between this scenario and any programs at Georgia Tech or elsewhere are purely coincidental.*

**Peer Feedback Requirements (Content, Format, etc.)**

- You will be asked to provide feedback on the designs of three other students via Canvas. Part of the beauty of this assignment is that, in reviewing their designs, you also have the opportunity to learn by observing different approaches to the same common problem.
- **You will be assigned to review the Assignment #1 submissions from three of your fellow classmates/peers who will be randomly selected by Canvas.** You will need to:
  1. Provide a grade, ranging from 1 – 10 for each of the following criteria: Readability, Validity, and Fluidity. Also include 1 – 2 sentences clarifying your grade. These do not have to go into detail and should be general comments. **Please note that the points that you assign to a reviewee WILL NOT affect their actual Assignment #1 grade.** Each reviewee's Assignment #1 grade will be solely determined by the OMSCS 6310 TA's review of their design. To provide consistent and complete feedback we request that your comments follow this given format (bolding is here for emphasis, it is not mandatory in your review):

Grading criteria: Readability

Grade: ##, 1 – 10

Comment text: <This is the text of your comment>,

Grading criteria: Validity

Grade: ##, 1 – 10

Comment text: <This is the text of your comment>

Grading criteria: Fluidity

Grade: ##, 1 – 10

Comment text: <This is the text of your comment>

**Readability** refers to legibility and understandability. Are you able to easily read the diagram and understand the intent of the design? Try to point out things that hinder understanding of

their design as opposed to aspect of the design that make it incorrect from a conceptual and/or technical perspective.

Good comments:

- Variable names appear to be chosen at random.
- Too much contrast in your color scheme, having trouble focusing on the design.

Bad comments:

- Great job!
- I like your design.
- I don't understand your design. (*vague & un-actionable*)

**Validity** refers to how well the design addresses and accomplishes the problem requirements.

This includes aspects of the design that make it incorrect from a conceptual and/or technical perspective. Are there any glaring issues or functionality that were left out?

Good comments:

- Based on the source material, P2L2 says you should have done xxx which you did well or did not do well.
- Referencing Chapter X of the Larman text, your design is missing two key aspects of this design approach, and so your design doesn't really address items 5-7 of the assignment requirements well or at all.
- By leveraging key aspects of Author Y's paper (from our reading list), your design manages to address all the requirements in a very clear and concise manner.

Bad comments:

- In my opinion, I would have done this differently... (*just because it's different doesn't mean it's wrong*)

**Fluidity** refers to the organization of the design components, including the choice of data structures and class models. Are the data structures chosen appropriately for the data they model? Is all data relevant to the system being tracked? Is the system engineered efficiently, employing only those structured needed to address the requirements? Or is it "over-engineered", where it includes numerous elements that aren't really needed to solve the problem?

Good Comments:

- You were consistent in your selection & use of design patterns F & G throughout your overall design.
- You used fixed array structures for everything even when dynamic allocation approaches would have been more appropriate aspects P and Q of the problem.
- There were several elements in your diagram - for example, classes L, M and N, or attributes U and V - that didn't seem relevant to any of the problem requirements.

Bad Comments:

- You should always use linked lists - it's just a fact.
- You need to have more classes. (*vague & unsubstantiated*)

2. Provide feedback on the strengths, weaknesses and/or unique aspects of their designs by providing **at least (3)** distinct observations or suggestions as comments in the student's assignment submission "Comments" section. These comments are separate and distinct from any line item comments that you make in the previous section. **You must select at least three (3) distinct course topics for each reviewee and provide relevant comments on those course topics about their design based on and grounded in the content presented in this course.** You should select topics for each reviewee based on the items that you feel are the most applicable to the student's design. To provide consistent and complete feedback we request that your comments follow this given format (bolding is here for emphasis, it is not mandatory in your review):

**Comment #:** 1,2,3,etc. <This signals the start of a new comment>

**Course Topic:** <Identify the course topic>

**Course Content Reference:** Cite the lecture number, Larman chapter, paper title and section, etc. that relates to your comment. Your comment does not have to be completely grounded in the reference material. It can be somewhat loosely related, so long as it is reasonably associated with the material.

**Comment text:** <This is the text of your comment>

- A few random points about your comments:
  1. Points will be taken off for overly poor grammar, incorrect formatting, incomplete sentences, capitalization, etc.
  2. Based on the submissions from past semesters, a strong and meaningful observation/suggestion is approximately 100-150 words or roughly 7 to 10 sentences.
  3. We will also compare your observations to other students who review the same submissions and might use that data as a basis for quality points. For an example, if your total comment is something like "I really like your polymorphism." and your fellow reviewers write 250+ words, fully grounded in course content with coherent suggestions for improving the reviewed design, we will know that you could have done a bit better.
  4. We will also award points for properly and effectively using the terminology that you have been learning during the course. Do not use lots of terms just to "rack up points": quantity over quality is not the goal. However, using key design terms from the SWEBOK, the various readings, Udacity videos, etc. in an appropriate and relevant way is highly encouraged.
  5. The best comments tend to elaborate on their point. They make a statement about the design, then back it up reasoning and references. You want your reviewee to be able to do something with and/or learn from your comment.

### Further notes

- The grades you assign in the Readability-Validity-Fluidity (RVF) section and accompanying comments will be very helpful to the reviewee in getting varied perspectives about their approach to the problem.

- Comments to a reviewee don't have to be negative. They should represent: (1) a strength or weakness of the design; or (2) possibly a unique and novel approach that differs from the way that you might have represented that particular aspect.
- The reviewer's name may be anonymous in Canvas, but you will see their name in the documents they submitted. This is ok, your review will still appear anonymous to the person you are reviewing and this is how Canvas does that.

### Canvas Submission

- Navigate to Assignment 1 in Canvas
- On the right-hand side of the page click on "Peer Reviews"
- There should be up to 3 anonymous reviews for you to do
  1. If you see less, it may mean a student has dropped the course, complete the ones you can
- For each review you should see an add comment box, add all your comments as 1 big text input
  1. If you need to update your comments just post the whole thing again with updates. We will grade the last comment submitted so make sure it is complete and has all the content in **one** submission
  2. It is highly recommended you work in a notepad editor then copy / paste everything over to Canvas and submit when it's ready

### How will my submission be evaluated?

- Each of the three student reviews (RVF grades/comments + 3 or more observations/suggestions) will be worth 25 points per review. **[75 points total]**.
- Our graders will evaluate the feedback that you provide to your peers. **Your Assignment #2 grade will be determined by the substance, quality and relevance of the feedback that you provide to your peers.** Given the summary nature of the feedback, our fundamental criteria will be to ensure that:
  1. You have provided 3+ distinct observations, and not just the same observation worded in multiple ways;
  2. Your feedback is written in a reasonably clear and understandable way and is grammatically correct (we're not looking to nitpick, but in the past many students haven't taken this seriously); and,
  3. You haven't said anything grossly incorrect from a technical standpoint – for example, "...classes, operations and relationships are all completely interchangeable..."
- It is important to recognize aspects of a design that represent potential weaknesses or errors. Sharing this information with your peers is key for learning, but the way you express your response is also important. Be as clear and concise as possible, but also be professional – avoid personal attacks, condescension, snide or crude remarks, and other similar behaviors in your responses.
- It is also important to recognize that there are often many different ways to approach a design, each having very valid strengths. Give credit when one of your peers might have found a more clear, concise, consistent, or otherwise novel or unique way to represent some of the design requirements. Keep in mind that "different and wrong are different": resist the temptation to immediately downgrade or disparage an approach that differs from your design, especially when your response is based solely on your initial instincts during the review.

- Though we will deduct points for factually incorrect comments, we will not go to extreme lengths to agree or disagree with the subjective and/or stylistic feedback that you've provided.
- If you would like to correspond further with your peers about the feedback received or provided afterwards, feel free to do so. Please remember to be as professional as possible: software architects and designers often work on teams, and the ability to communicate while being both direct and respectful is often essential to success.

**Closing Comments & Suggestions:** We (the OMSCS 6310 Team) will likely conduct an Office Hours where you will be permitted to ask us questions further questions about the feedback. We are often asked to provide an "official solution" for the design phase once the due date has passed, but we are generally reluctant for various reasons. This assignment offers, in some sense, the next best (or possibly better) option; and allows you to develop your ability to review other's designs, while also receiving alternate feedback on your own.

**Quick Reminder on Collaborating with Others:** Please use Ed Discussions for your questions and/or comments, and post publicly whenever it is appropriate. If your questions or comments contain information that specifically provides an answer for some part of the assignment, then please make your post private first, and we (the OMSCS 6310 Team) will review it and decide if it is suitable to be shared with the larger class. Best of luck on to you this assignment, and please contact us if you have questions or concerns.