Name	Andersen Westphal	Team	Nitrogen Interactive	TL	1	Date	11/18/2025	Time	8 am

Fill in the underlined areas (and the boxes above), now but don't write on the remainder of this form.

Contribution: Briefly describe what your feature(s) is/are: My features include the player inventory and the shop system. The player inventory —— controls the currency and the weapons that the player has. The shop lets the player upgrade —— Walk me through your Gantt chart. How long did this take? How long did you estimate it would take? What did you learn about your skill as an estimator? I have about 67 hours recorded. I estimated 54 hours. Things took longer than expected because of the unity system. I underestimated how quickly I would be able to pick things up. Run your game and point out places where your code is called and run. (I will cycle through asking you this question and the next one until you either run out of interesting things to talk about or it is clear that you have made an above average contribution.) Show the C++/C# code that was run. Walk me through the methods called from the time it enters your section of code.	/10
Technical: Walk me through your test plan. Give an example where a test case later found a bug in your code by things a teammate added later. (Or explain why you chose a test case specifically because you wanted to ensure that a teammate would know if they broke your code.) I found a bug where you could buy things and go negative in money. Since I did not account for that in my original design ——	/4
Pick a Prefab you have created that is documented well in a separate readme file. (I will point to several places in your code documentation and ask) What question where you trying to answer here? Who do you anticipate would be asking that question? What other questions might this person need the answers to? Prefab Name: ___ShopInterface_____	/3
Show me a class in your code where there could be either static or dynamic binding. Write some mock code on this paper showing how you would set the static type and dynamic type of a variable. Super Class: ___DiscountParent_____ Sub Class: ____DiscountChild_____ Virtual Function: ___ApplyDiscount_____ Choose a dynamically bound method. What method gets called now? Change the dynamic type. What method gets called now?	/3

Pick a statically bound method. Which one would be called in each of the two previous cases?
Show me an example of reuse in your code where you violate copyright law.
How does it violate copyright?___The song is the shop song from Nier Automata_____
What did you have to do to integrate it with the code you wrote? What are the legal implications if you market your code with the re-used portion? Use fair use argue that you can use this anyway.

/4

I added the song file to the AudioManager and linked it to my scene. I could be sued for copyright infringement, but since it is for educational purposes, and the use of the song in my game is not going to harm profits for the original company, it falls under fair use.

4. One big or two small, well-chosen patterns.
Small Patterns = {Singleton, Private Class Data}
Which patterns did you choose?
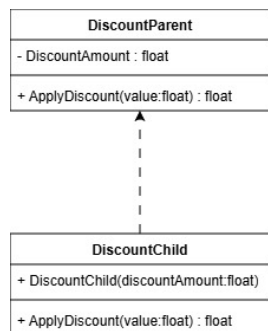1._____Strategy Pattern_____

/4

2._____Command Pattern_____

Why did you choose each pattern? (Justify your use of it).

   I used the strategy pattern with my discount system because it uses encapsulation.
   I used the command pattern with the shop in order to handle the upgrades.

Draw the class diagram for your pattern(s).

DiscountParent

- DiscountAmount : float

+ ApplyDiscount(value:float) : float

⇡

DiscountChild

+ DiscountChild(discountAmount:float)

+ ApplyDiscount(value:float) : float

Would something else have worked as well or better than this pattern? When would be a bad time to use this pattern?

   A factory pattern could have been used for the shop if the shop was producing items, but my current shop just does upgrades and augments. A bad time to use the strategy pattern would be if I needed to save things between instances.