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Project 1

CSCD212

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In my project one I found it kind of hard to include all three patterns because my head would just spin when I tried to think of how to include them and tie them together, but I believe I did okay including the design patterns. It gets your mind running on how you will tie it together or what each class needs what methods to help it run correctly. When I thought I had it figured out it would stop working because I did not use the pattern correctly so that was also another thing that was difficult. Final draw back was having to constantly move variables from one class to another because initially I thought it was supposed to be in one class and it ends up needing to be in another class.

The first design pattern I used was the “builder” pattern to help me build my tickets. I have a class named “TicketReservation” to help build the ticket based on what the user inputs. It will ask the user for name, DOB, seatClass, seatNum, boardingClass, and the number of checked bags. This happens in the TicketReservation class in the addTickets method lines 45 to 48 is where the user inputs the info for it to build a ticket. Then we used then builder and decorator method to help calculate the costs of the ticket based on if you are in first, comfort, or economy plus the amount of checked bags($50 a bag).

The second pattern I used was decorator to decorate the planes in the classes “Boeing737”, “Boeing787”, “AN225”, and the “ticket” because in the plane classes I decorated the plane on how many rows it has, number of seats per row, and total seats available in each plane. In the ticket class it was used to calculate the price for example each checked bag is $50 so $50 x number of check bags plus price of ticket $400 for first class, $300 for comfort class, and $200 for economy class. The lines of code in the plane classes listed above are lines 8 to 9 for each class. In the ticket class lines 19 to 22 I labeled the prices for each seat class as well as the price for the checked bags

The third and final design pattern was the strategy pattern, it was used to select the type of ticket you are getting whether it is comfort, first, or economy. They have a different price, so it varies on what you enter. Also, the boarding behavior interface class I also used the strategy design pattern from lines 9 to 11 to determine how the passengers get onto the plane. It tells the person boarding and the seat they are assigned to or selected along with boarding class.