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**Object-Oriented Development**

**Section:** W01

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**Iteration 2**

**Class Diagram:** It helps to show the static structure of classifiers in the application. This diagram provides a basic notation for other structure diagrams prescribed by the application. This tool helps the developers to understand the instructions and the roles of each representative through the application. It also has a class for the trip details that include reservations and transportation. That makes it easier for the clients to understand and have all the needed information for the trip.

1. **ReadFactory Pattern:** The Java application should have a read factory that works in tandem. It helps to return the strategy for reading a trip detail that the application has been saved to the application.
2. **WriteFactory Pattern:** The Java application works in conjunction with the strategy pattern. The write factory helps to save the choice of the trip that has been picked.
3. **Strategy Pattern:** It is designed to allow the clients to pick up the details of the trips that they want. We used JSON and XML to change the configuration through the runtime.
4. **Singleton Pattern:** This pattern is split into trip details and person, including travel agents and travelers. The travel agents interact the most with this pattern. They are the ones that build up the details of the trips and the clients must only pay for the trips.
5. **State Pattern:** It helps to build the details of the planned trip. It generates the itinerary that the customer can have as proof of the planned trip. The state pattern can be accessed once the whole trip is fully planned, and the payment is received. It also loads all the information, so the user can exist the application and still be able to go back and resume from where it was left.
6. **Decorator Pattern:** It has concrete for each section of the itinerary. All the classes that were created can pull and save data to input the data for the planned trip. It includes the booking agent, the trip number, and the message.