Sample Essay

Most projects this term include a short writing assignment. You will be asked to write a two or three paragraph paper on a specified topic. This sample is intended to give you an idea of what we are looking for. The specification for this (hypothetical) writing assignment is:

Imagine you are writing an object-oriented application for a travel agency. Your program will be used to help clients create itineraries. What sorts of classes do you think your application might need? Explain how the different classes relate to each other and how some classes might be subclasses of others.

Transportation

If I were to write a program to help customers arrange trips I would need to define classes for various modes of transportation. It would be tempting to define classes for major types of travel, e.g. planes, trains, and automobiles, but I think it would be better to have classes for public and private transportation. To use public transportation a person needs to know a schedule, and to make a reservation based on the schedule, but for private transportation (e.g. their own car, or a friend’s car) a person can can travel when they want to.

The picture below shows one possible class hierarchy. The attribute that all means of transportation have in common is the number of people that can be transported. Some attributes that public transportation has are the name of the company that provides the service, contact information for the company, and a schedule of their trips. Then more specialized types of public transportation would be airline companies, Amtrak (for train travel), and so on.

I put taxis and shuttles as types of private transportation. Even though they are owned by companies, and might be considered some sort of public transportation, they are more like private transportation because people can just call up the company to arrange a trip and don’t have to book a reservation according to a schedule.