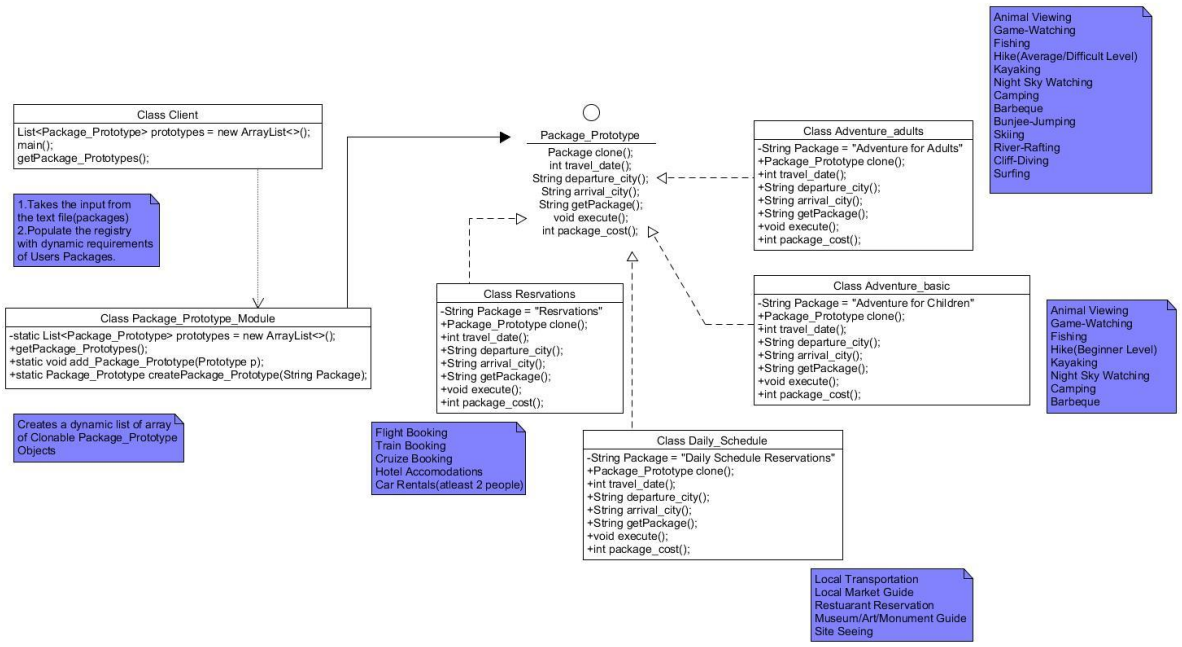

Prototype Pattern

In this assignment I decided to apply Prototype Pattern. The reason behind choosing the Prototype Creational Pattern was that the Client/Application Users will narrow down their own kind of Packages and the details are already stored in a text file which might keep getting updated. Instead of calling methods again and again, I decided to create a clone of the Packages. Creating instances of Packages will be costly. Therefore, I will create all the kinds of Package prototype instances, and when I will need a new instance, I will just clone the prototypes by overriding the clone method(). Also, the instances of a class can have one of only a few different combinations of state.

Role of Each Class

Client : Client is responsible for using the dynamic array list of objects(registry service) to access prototype instances from text file.

Class Package_Prototype_Module – It is a kind of Package Prototype Factory Generator. It will get the type of Package from the text file.

Package_Prototype - An interface used mostly for creating type references.

Class Reservations - Prototype for Users who need only reservation of transportation planned. Implements interface Package_Prototype.

Class Daily Schedule - Prototype for Users who need daily schedule to be planned exclusively. Implements interface Package_Prototype.

Class Adventure_basic - Prototype for Users who are of the age 4-14 or Family or above 60 to be planned exclusively. Implements interface Package_Prototype.

Class Adventure_Adults - Prototype for Users who are of the above 14 to be planned exclusively. Implements interface Package_Prototype.

Advantages

1.This approach saves costly resources and time, especially when the object creation is a heavy process.
2.Helps us to hide the complexity of making new instances from the client.
3. Adding and removing products at run-time
4.Specifying new objects by varying values

Disadvantage

1. Implementing clone() can be difficult when their internals include objects that don't support copying.
2. This pattern hides concrete product classes from the client
3. Code Duplication