Our program implemented the Prototype design pattern through its use of the Room class set. Each specialized room is instantiated with various information such as room numbers, amenities, and restrictions. These rooms are then cloned in order to create the necessary number of room objects for the resort.

We have also employed the Decorator design pattern into our MealPlan class. By using a topping decorator and meal plan decorator to cover the options provided by the resort, we are able to edit or extend the functionality of our objects without employing inheritance in every class.

The observer pattern is also implemented in our project through the observer/guest classes. By assigning an observer to our guests we are able to notify various pieces of our program, such as reservations and waitlists, to new activity that may require synchronized action throughout the program.