* Inheritance was used in this design in several ways. The types of events are a subclass of the Event class and many of the design features of the factory and strategy design patterns require inheritance (i.e., the type factories need a base event factory, the strategies needed to be inherited from a base searching strategy).
* The vector of pointers is used to keep track of classes as the classes are quite large. Instead of creating a new class copy to put into a vector, it is much more efficient to keep track of the smaller pointers to the class than the larger classes themselves.
* Design patterns can be beneficial as they can provide the ability to reuse certain aspects of the code in a much simpler form, creating them in factories or implementing the strategies. This can cut down on a lot of repeat/copy pasted code throughout the code.
* The main challenge I found was the complexity of implementing the patterns made the code much more verbose than other implementations that may have worked with the smaller scale of this project.