DP_HW1

Answer 1:

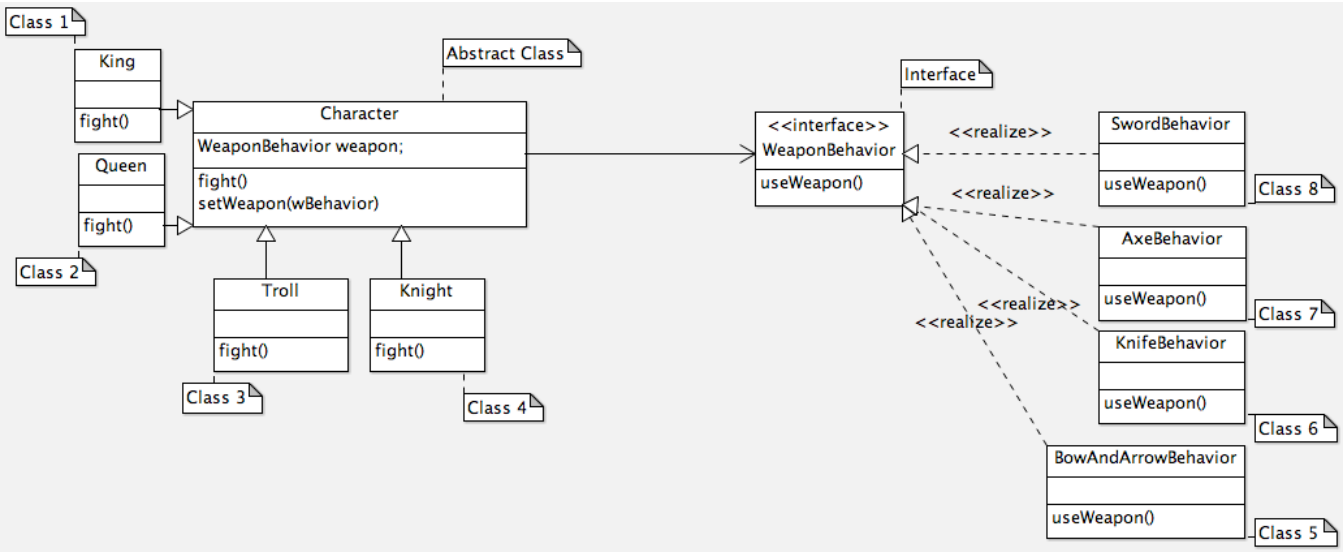
1. When a Runtime Exception is encountered from a business method, the rollback() method is called on the Hibernate JDBC Transaction.
2. The rollback() method in turn calls JDBC Rollback. After this the call is returned to the Spring Transaction Interceptor.
3. The Spring Transaction Interceptor calls the close() method on the Hibernate session.
4. The Runtime exception is re-thrown back up to the Database Job.
5. It is then propagated up the chain to the calling method to be handled as desired

Answer 2:

Libraries generally provide the implementations of various features, whereas Design patterns are meant to provide us a higher level understanding of how to structure classes and objects etc, to solve specific problems. We use design patterns to solve the problems.

Design Patterns provide an overview of how a certain type of problem can be solved whereas libraries provide actual implementations to solve a problem. Also there can be different combinations of patterns used in conjunction to find solutions, but coming up with libraries would not be possible for every specific case. There are libraries which do make use of design patterns in their implementations but there is no exhaustive library which encompasses all the available design patterns.

Answer 3:



Answer 4:

Push	Pull
Push happens when the data is sent to the Observer by the Subject	Pull happens when the data is retrieved from the Subject by the Observer
In Push, the Subject can send all the data needed in one notification thereby negating the need for multiple calls from the Observer	In Pull, Observer can retrieve only the data it requires rather than processing the entire notification sent by the Subject in case of Push
Any change in the Subject would require changing all the update calls on every observer	Any change to the Subject requires only the addition of more getter methods in order for the Pull to work