Name - Project Management System

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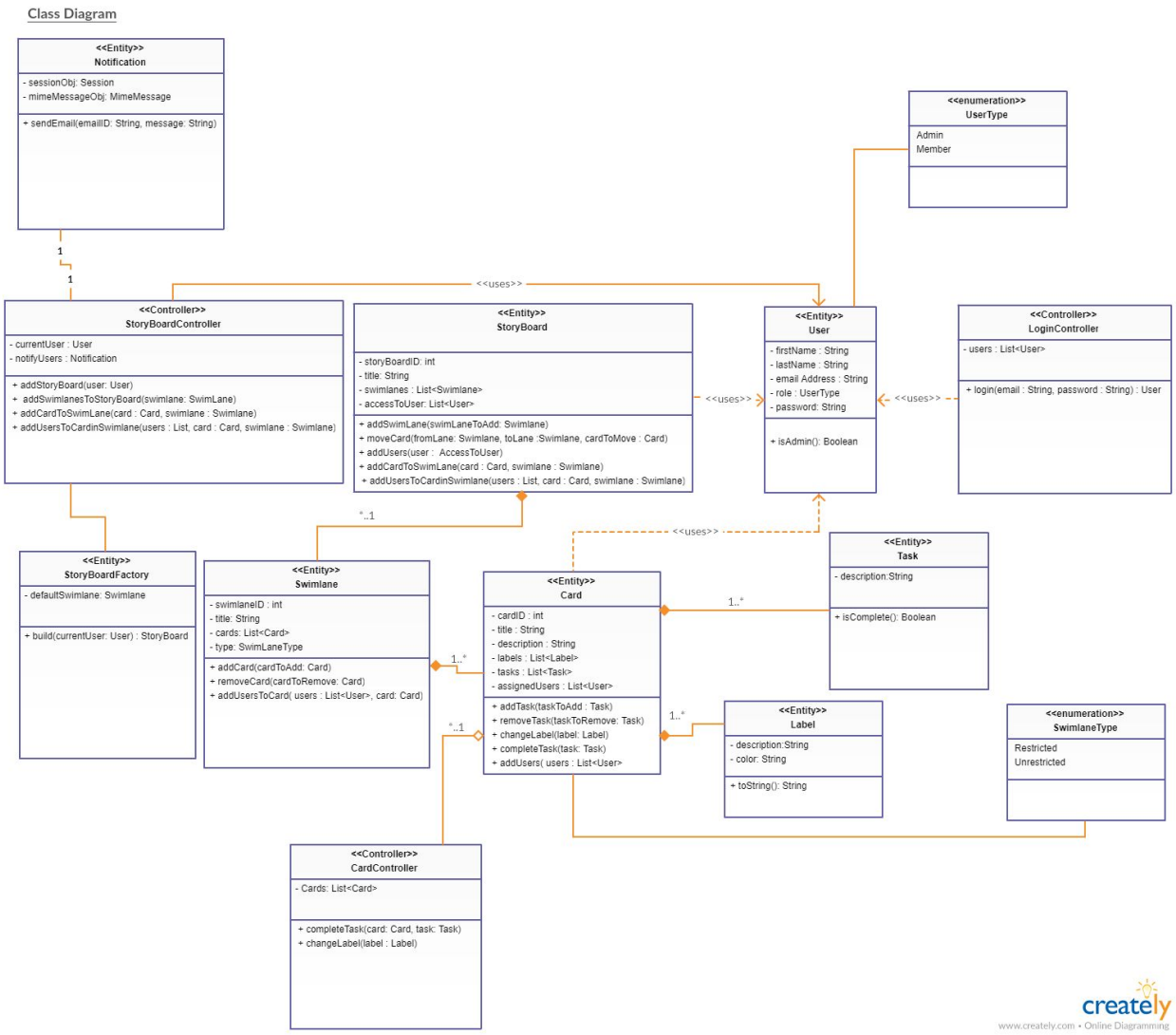
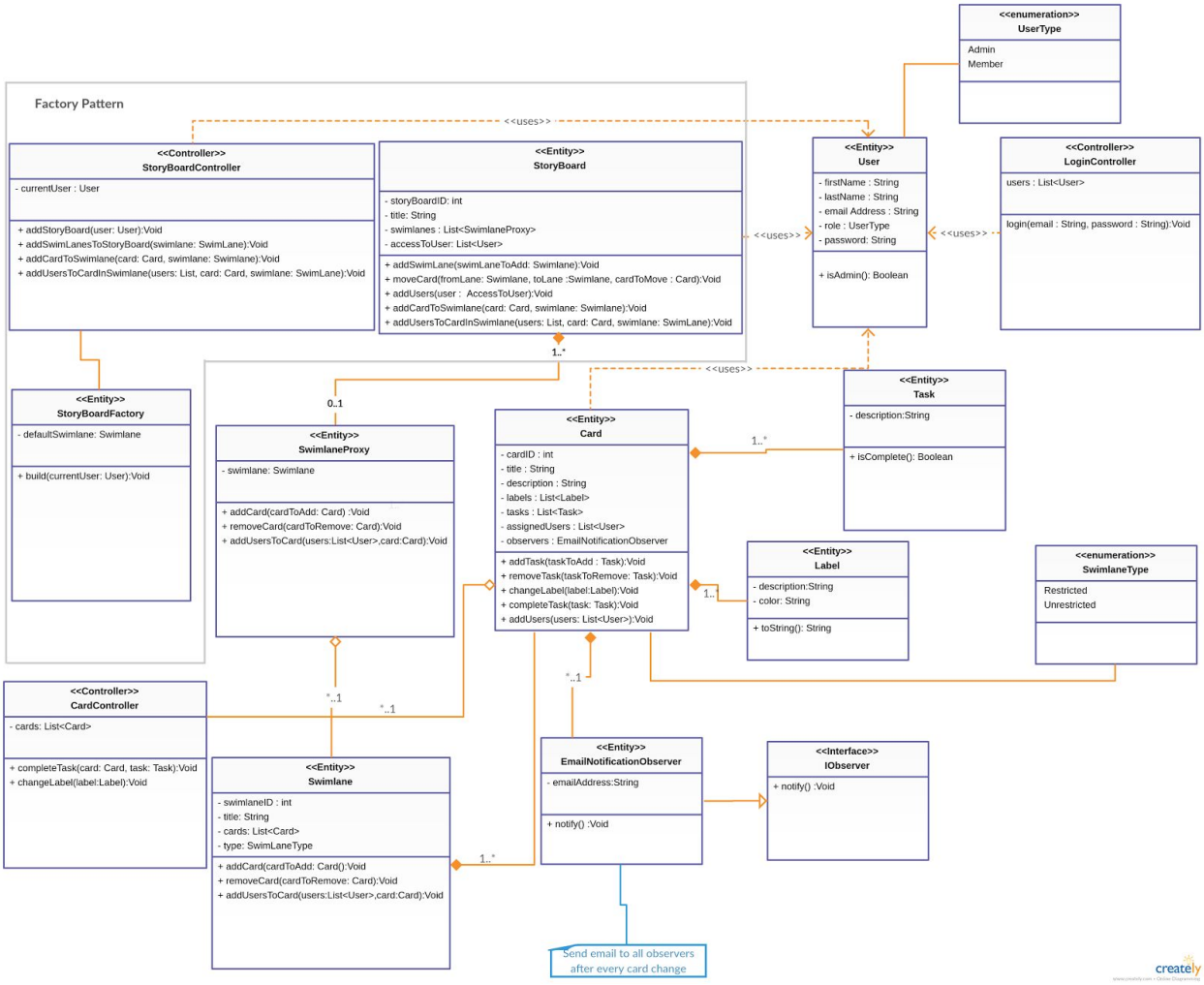
Old Class Diagram



Refactored Class Diagram



We have refactored the class diagram with the help of the following design patterns:

Design Pattern Used

- Factory Design Pattern

Factory Design Pattern is one of the most important creational design pattern. In our project we are using factory design pattern to create storyBoard object using storyBoardFactory.

Design Pattern Added

- Observer Design Pattern

Observer is one of the behavioral design pattern. It defines a one-to-many dependency between objects so that when one object changes state, all its dependents are notified and updated automatically. In our project we are using it to send email notifications to users(assigned to)

whenever any card is changed. EmailNotificationObserver sends email to all the users associated to a card whenever any change is made to that card.

- Proxy Design Pattern

Proxy pattern is one of the structural design pattern. It provides a surrogate or placeholder for another object to control access to it. In our project we are using it to restrict user access to specific card. Users should be only able to change card if the card is not in restricted swimlane. Proxy pattern helps us to restrict access to card if the card is in restricted swimlane. SwimlaneProxy class helps to restrict user access to restricted swimlanes.