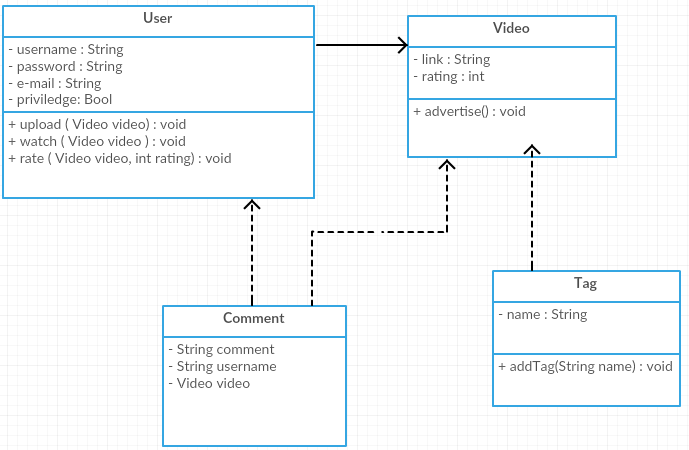
VideoPlace

Analysis and Design Document

# Elaboration – Iteration 1.1

# Domain Model

The domain model will consist of 4 main classes: User, Video, Tag and Comment represented as such:



# Architectural Design

## Conceptual Architecture

For this project I have decided to use the Layered Architecture, consisting of the following layers:

- User Interface

- Presentation

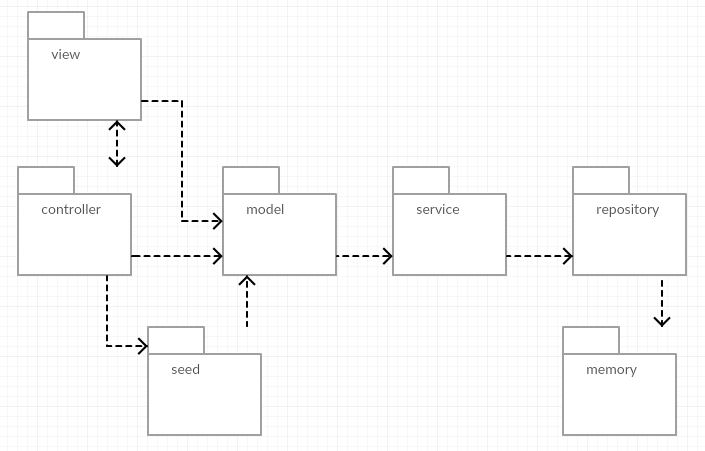
- Business Logic

- Persistence

- Database

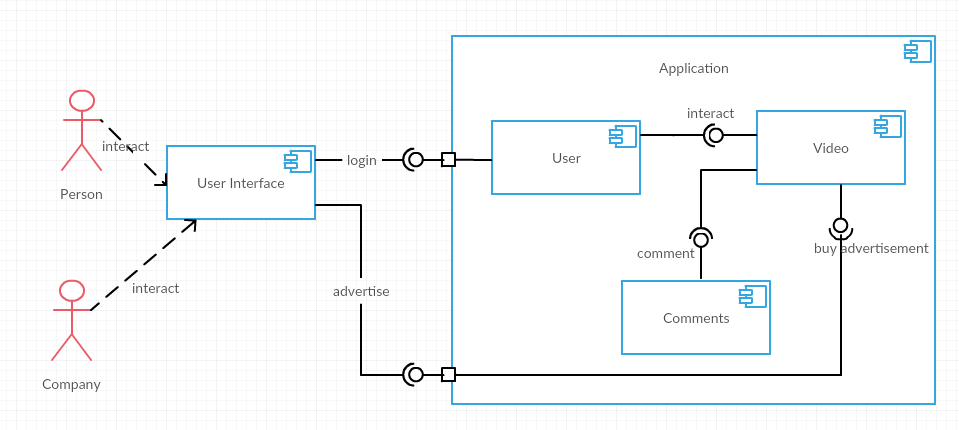
This architecture was chosen because my application performs specific roles which can be distributed into layers as described above, making dependencies flow from the upper level to the lower level, thus methods belonging to a certain layer not being able to be used by a regular user. This architecture is also permits modifying classes without needing to change code in others.

## Package Design

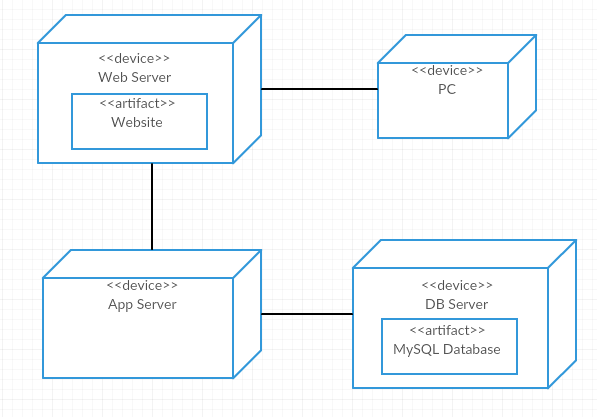


## Component and Deployment Diagrams

Component diagram:



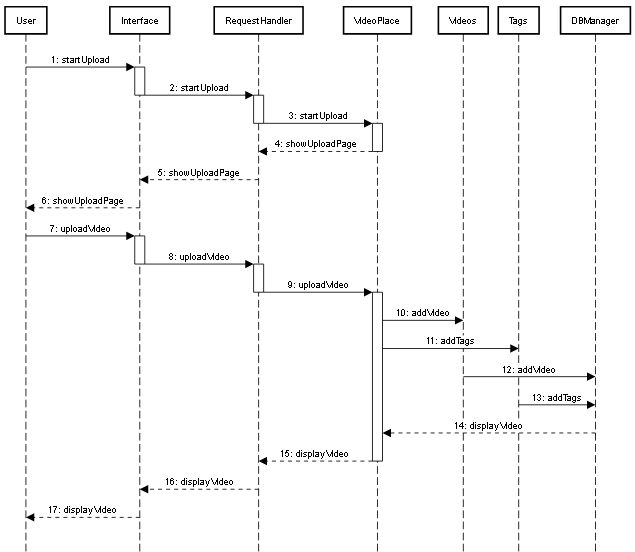
Deployment diagram:



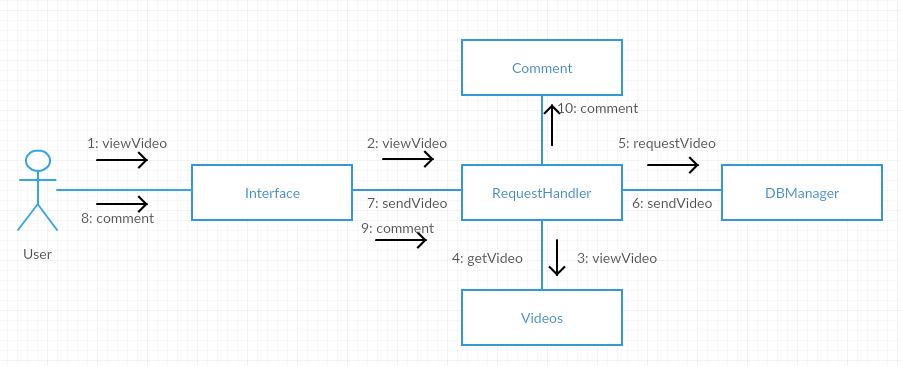
# Elaboration – Iteration 1.2

# Design Model

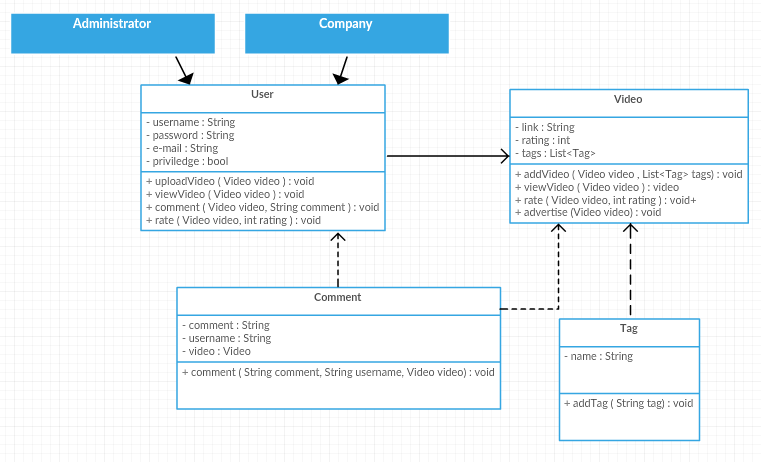
## Dynamic Behavior

Sequence diagram for uploading a video:

Communication diagram for leaving a comment:



## Class Design

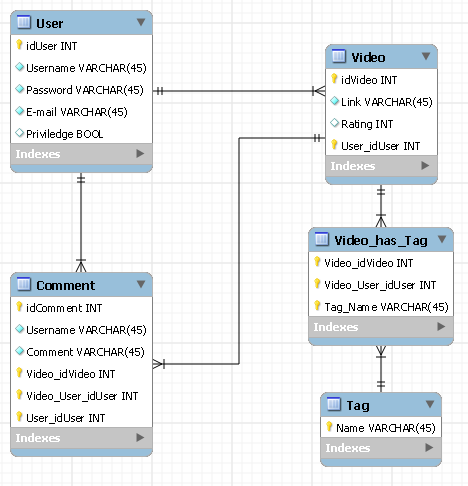


The design patterns used will be the Observer and Abstract Factory patterns.

The Observer Pattern will allow for constant updates on videos, such as comments, ratings or uploads so that users can receive real-time feedback on the website.

The Abstract Factory pattern will be used to group objects that have the same types of methods with different implementation, allowing also selection between different concrete factories.

# Data Model



# Test Strategy

Unit tests:

These tests are used to verify that methods of the Service layer work correctly. Such tests may include:

-viewing, rating, commenting on a video

-promoting a user as administrator

-editing/deleting comments as an administrator

Integration tests:

These tests ensure that the whole system is working correctly as a whole. Some examples:

- uploading a video (logging in, adding a video, the video is displayed)

- advertising on a video

# Elaboration – Iteration 2

# Architectural Design Refinement

*[Refine the architectural design: conceptual architecture, package design (consider package design principles), component and deployment diagrams. Motivate the changes that have been made.]*

# Design Model Refinement

## *[Refine the UML class diagram by applying class design principles and GRASP; motivate your choices. Deliver the updated class diagrams.]*

# Construction and Transition

# System Testing

*[Describe how you applied integration testing and present the associated test case scenarios.]*

# Future improvements

*[Present future improvements for the system]*