

CS Department Automated Information Timeline

Assignment 3.1: Domain Model

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1 Background from readings

According to C. Larman, The three strategies to identify candidate concepts are:

- Noun-Phrase Identification from use cases and requirements
- Conceptual Class Category Lists
- Class Responsibility Collaborators

The concepts on the domain model for CS Department Automated Information Timeline project have been derived by identifying the noun phrases from use cases and the requirements.

2 Concepts, Attributes, and Associations (Draft)

Below are the candidate concepts and their attributes identified using the noun phrases from the requirements.

1. **Post**: title, content
2. **DisplayedPost**
3. **Page**: title, content
4. **Event**: dateOfEvent
5. **EventCalender**
6. **Media**: title, mediatype
7. **MediaLibrary**
8. **Notification**
9. **Faculty**: name
10. **OfficeManager**: name
11. **Administrator**
12. **DisplayedMedia**
13. **DisplayMonitor**

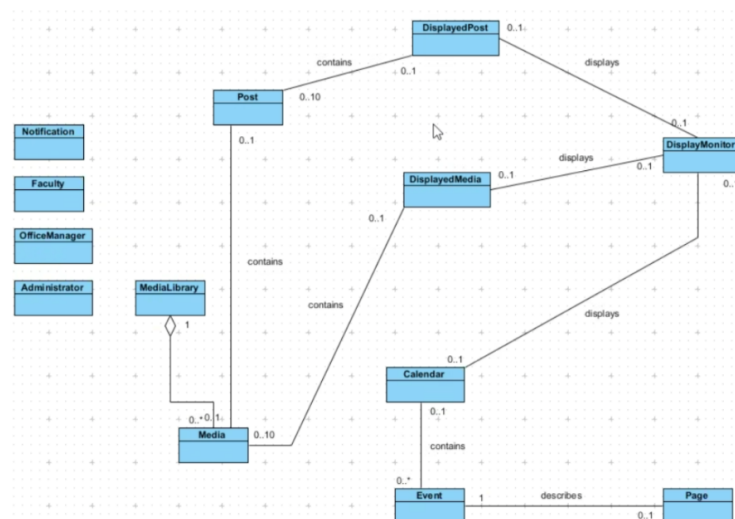


Figure 1: Candidate concepts and associations (Draft)

These candidate concepts are further discussed among the team members and are further refined to create a **FINAL DOMAIN MODEL** with concepts, name associations and multiplicities agreed upon by all team members.

3 Domain Model

3.1 Domain Model (Drafts)

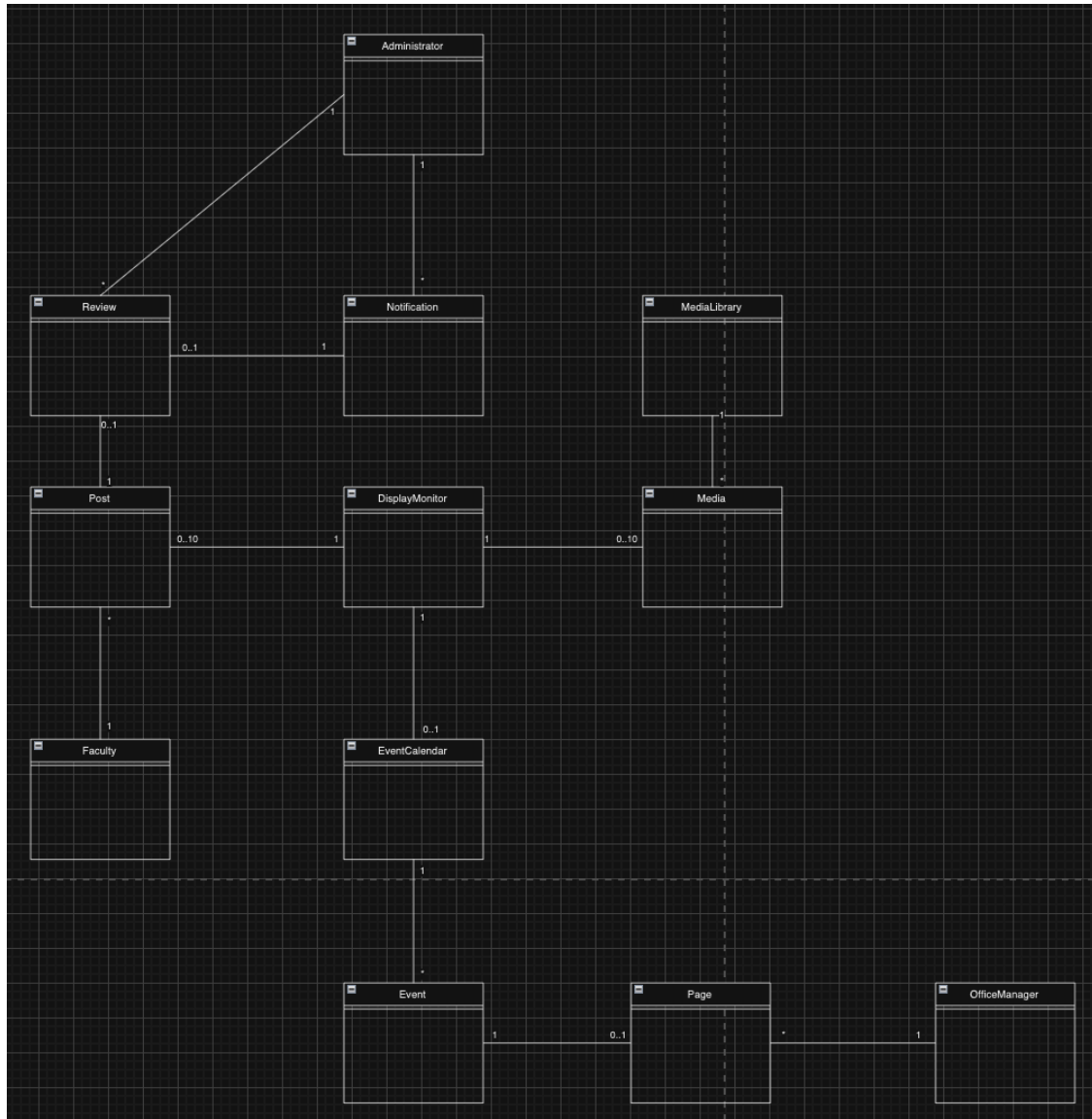


Figure 2: Domain Model - Draft 1

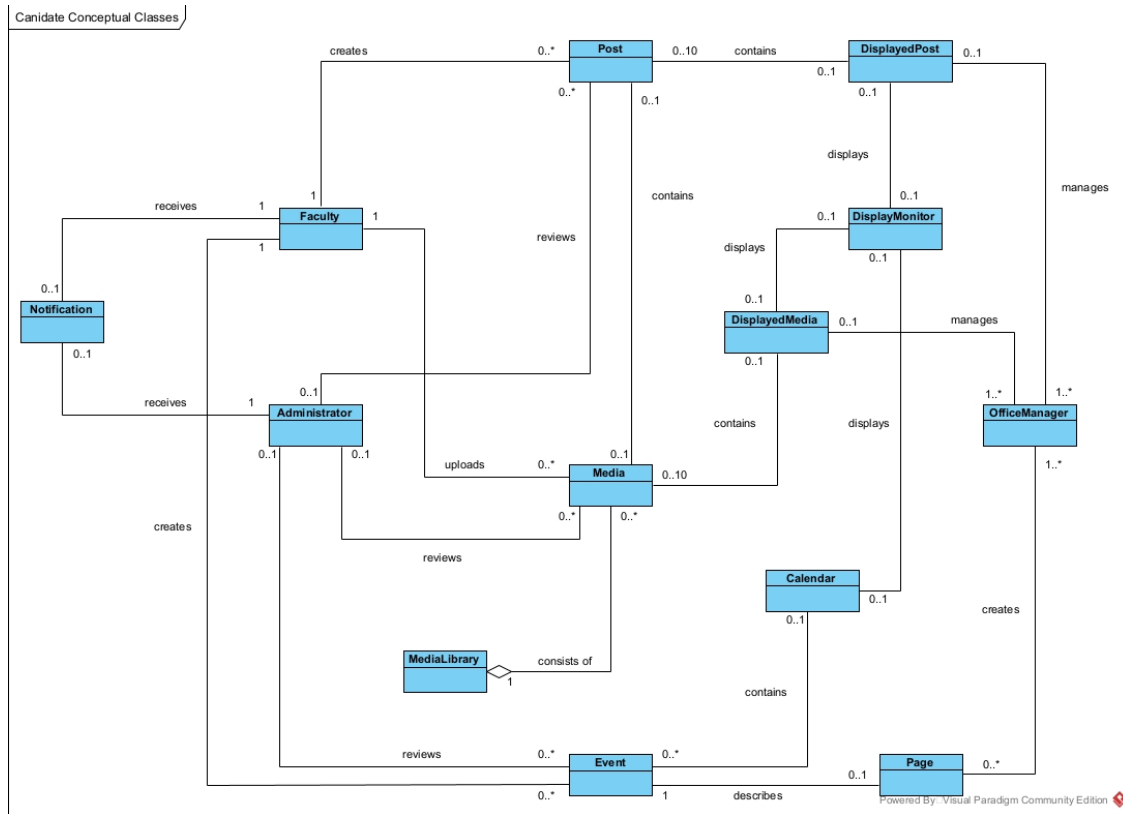


Figure 3: Domain Model - Draft 2

3.2 Getting to the Final Domain Model

3.2.1 Use Case text reference

Below are the summarized use cases. This listing has been updated from the previous design submittal, and an updated use case diagram can be found at the end of this document. New use cases found are flagged in list as well for clarity.

- UC01 - View Media Library
- UC02 - View All Posts
- UC03 - View Event Calendar
- UC04 - Create Event
- UC05 - Edit Event
- UC06 - Delete Event
- UC07 - View Event
- UC08 - Submit for post/media/event review

- UC09 - Review for post/media/event approval
- UC10 - Create Post
- UC11 - Edit Post
- UC12 - Delete Post
- UC13 - View Post
- UC15 - Stage posts for display
- UC16 - Stage media for display
- UC17 - View Media
- UC18 - Add Page to Event (*New Use Case*)
- UC19 - Edit Page of Event (*New Use Case*)
- UC20 - Tag Event for display (*New Use Case*)
- UC21 - Receive notification for approval request (*New Use Case*)
- UC22 - Receive notification for approval completion (*New Use Case*)
- UC23 - Upload new Media (*New Use Case*)

3.2.2 Points discussed during review of Domain model drafts

This section contains items discussed as a group during the review and finalization of the Final Domain Model. Progression was made from Domain Model - Draft 1 to Domain Model - Draft 2, but there was back and forth between the two.

- The system will always display 10 of each of the following items (References **REQ10**)
 - Posts
 - Media
 - ◊ If there are not 10 items of a particular category within the system that is in the approved state, the system will display all approved items within that category. (**Assumption based on implication in problem statement**)
- The system will only display the event pages that have been tagged, without limit. (References **UC20, REQ18**)
- An Office Manager can tag and/or stage up to 10 items for display at any time. (References **Assumption based on implication in problem statement**) (References **REQ10**)
 - In the event of multiple Office Managers, the system will randomly select 10 tagged/staged media for display to maintain a limit of 10 items in a specific category being displayed at any given time on the on-campus television display.
- An aggregate media library should exist so that users of the application may browse all approved media. (References **REQ04/REQ05/REQ09**)
- Upon creation of any category of item submitted to the application, the new item will be initially set to a state which does not allow for display/inclusion in the application. This state can only be updated through a review by a system administrator. (References **REQ02/UC08/UC09**)

- DisplayedMedia and DisplayedPosts were removed from the initial draft as these classes were decided to be “software constructs” that were not necessary in the domain model. Additionally, their removal assisted in the discovery that the classes may not be necessary as the intent of the classes, to provide a storage location for displayed items, could be captured through attributes located on the parent class itself. (No associated REQ or UC – software design/implementation discussion)

3.2.3 Final Domain Model

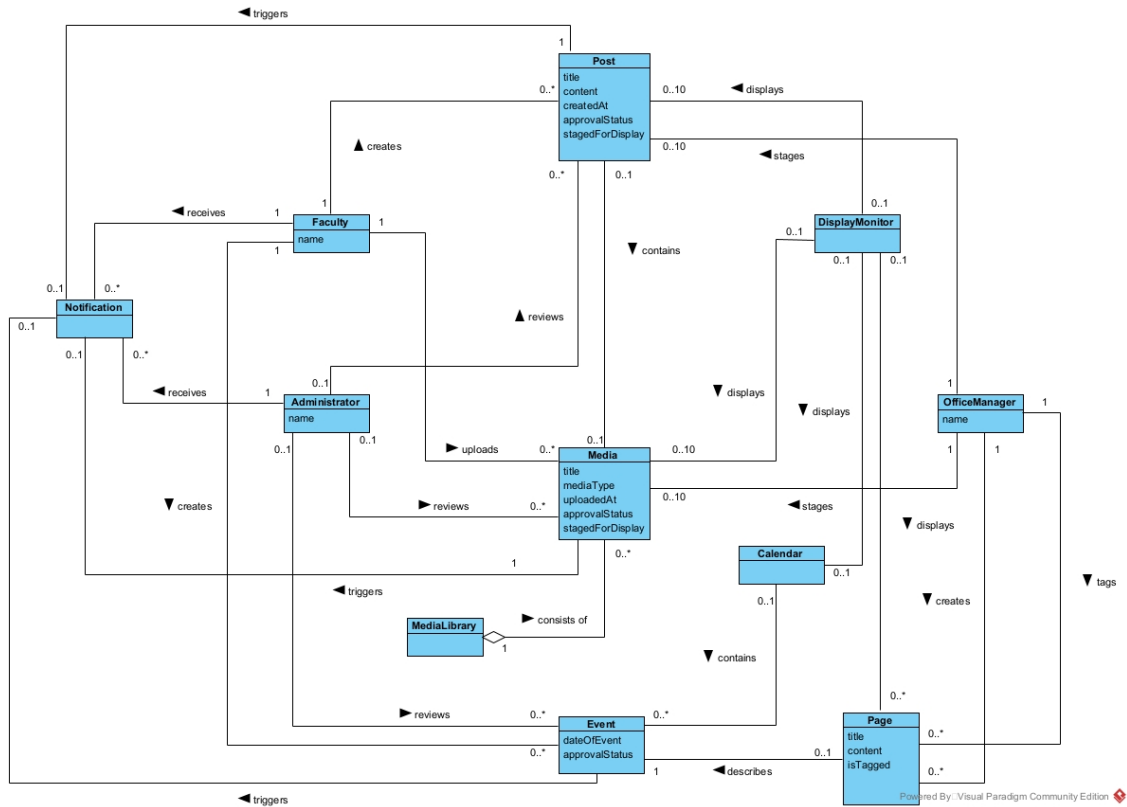


Figure 4: Final Domain Model

4 Updated Use Case Diagram

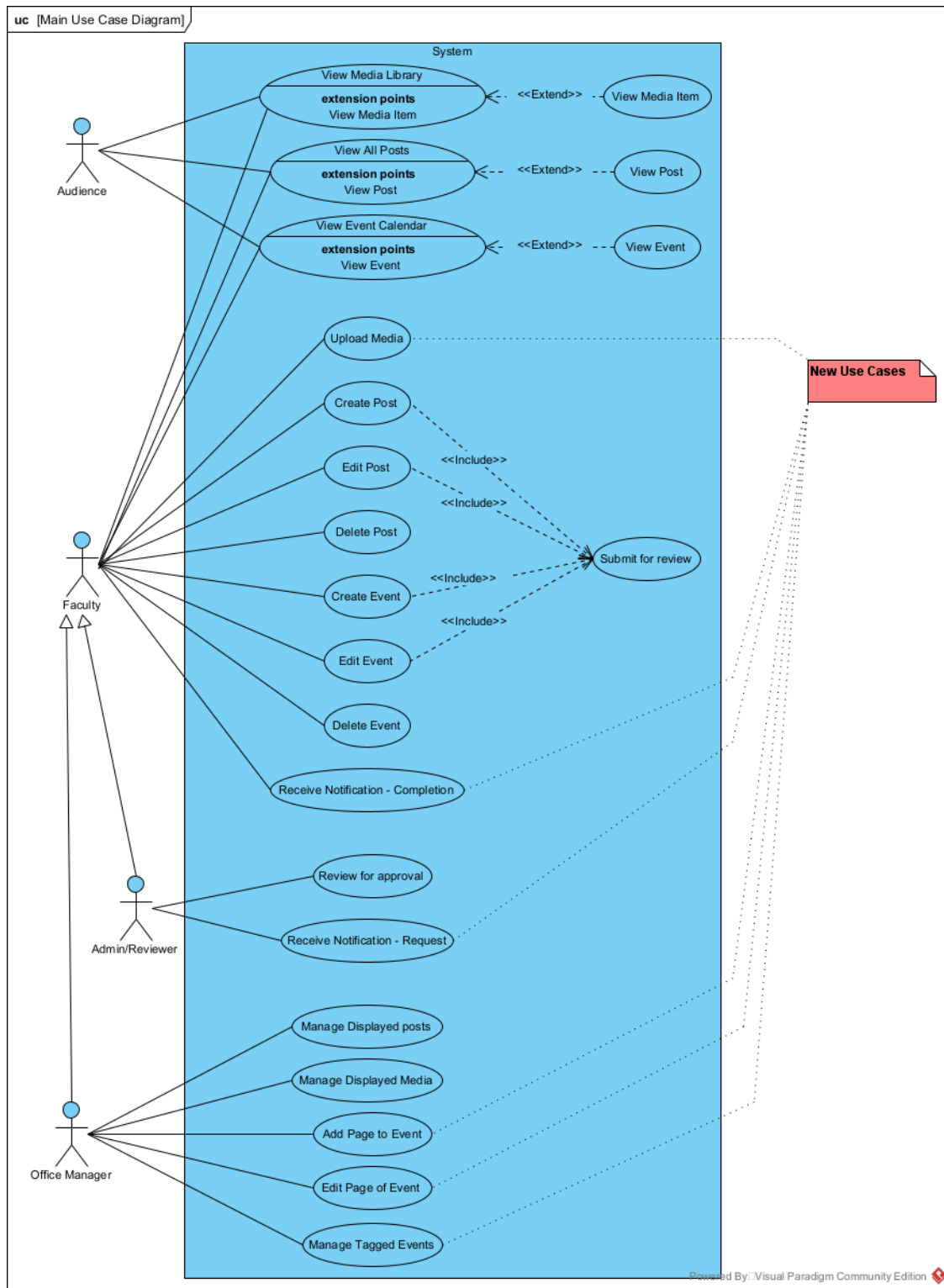


Figure 5: Updated Use Case Diagram