CSE 3105/CSE 3137

OBJECT ORIENTED ANALYSIS AND DESIGN

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COURSE PROJECT: *Media Browser Application Project*

Requirements Analysis Document

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Table of Contents

1 Introduction

We aim to achive such a program which can display images, play music and videos. We want to develop a media browser with basic tools so our scope includes the basic operations of a media browser which is accessing or editing existing datas. Our main purpose is to develop the program according to our own needs and minimalistic standarts. Our success criteria and objectives are all functions should work as we mentioned in project descriptions.

2 Current System

Current media browser systems have complex design and unchangeable settings, lack of categorization, file management and non-creative user interactions with file accesses.

3 Proposed System

Our proposed system claims to replace the complex designs and categories of the current media browsers with a more user-friendly application with the freedom of creating your own categories and tags with basic,vital operations.

3.1 Overview

We have two types of requirements ; functional and non-functional. Functional ones describe the interactions between our media browser and it's environment. Non-functional ones defines the overall attributes of the media browser system.

3.2 Functional Requirements

Our media browser must be able to:

- ✔ Display image
- ✔ Play music or video
- ✔ Adding tags
- ✔ Edit images
- ✔ Zoom in/out video or image
- ✔ Categorizing according to date ,type and user requests
- ✔ Full screen minimize
- ✔ Skip forward/skip back
- ✔ Next video/previous video
- ✔ Repeat music or video
- ✔ Volume settings
- ✔ Creating playlists

- ✔ Easy interface mode
- ✔ Restriction of acces

3.2 Nonfunctional Requirements

User interface and human factors:

- ✔ System will be used by viewer users.
- ✔ User types will be admin viewer and guest viewer.
- ✔ It is important that the system is easy to learn,the user should understand the UI without thinking too much.
- ✔ System should provide security to prevent user from commiting unintended interactions.
- ✔ There aren't any input or output devices.

Documentation:

- ✔ System has a user guide to explain the process.

Hardware considerations:

- ✔ There isn't a hardware recommendation.

Performance characteristics:

- ✔ There aren't any constrains about data size or capacitiy.

Error handling and extreme conditions:

- ✔ There should be error windows and sound for extreme conditions and if error window is open system doesn't take any input until window is closed by user.

System interfacing:

- ✔ Input is coming from outside of the proposed system.
- ✔ Output is not going outside of the proposed system ;occurs inside the system.
- ✔ System will only support certain types of popular file formats(mp3,mp4,jpeg ,png,gif).

Quality issues:

- ✔ System should be portable for easy usage.
- ✔ There are no need for maintance.

System modification :

- ✔ Some parts of interface could be modified.
- ✔ Visual and orderal modifications should be expected.

Physical environment:

- ✔ This system will be operated only computers.
- ✔ Only target equipment is computer.

Security issues:

- ✔ At the user's request ,acces to files via application should be locked.The password for this lock should be kept securely with encryption.
- ✔ Physical security is not an issue.

3.4 System Models

3.4.1 Scenarios

Scenario 1: Bob opens the media browser system and goes to video section. He chooses a video and adds "birthday" tag to this video then he decides to watch another video that tagged with "birthday" tag so he clicks the tag and goes to the birthday videos.

Guideline 1:

- **Use case name:** AddTag
- **Participating Actors:** Viewer(Bob)
- **Entry Condition :** Opening the media browser
- **Flow of events :** 1-Bob displays a video.
  2-Bob adds tag to the video.
  3-Bob searches for a video with "birthday" tagged.
- **Exit conditions :** None
- **Exceptions :** Invalid tag search
- **Special requirements :** None

Scenario 2: Jack opens the media browser system and goes into display video section then he searches for that video with specific date then he playes it .After he begins to watch, he minimize the video and goes to music section and looking for videos with specific tags then he adds these musics to private playlist one by one. He watches the video and make a playlist at the same time.

Guideline 2:

- **Use case name :** CreateCollection , DisplayVideo
- **Participating Actors :** Viewer(Jack)
- **Entry condition :** Openning the media browser

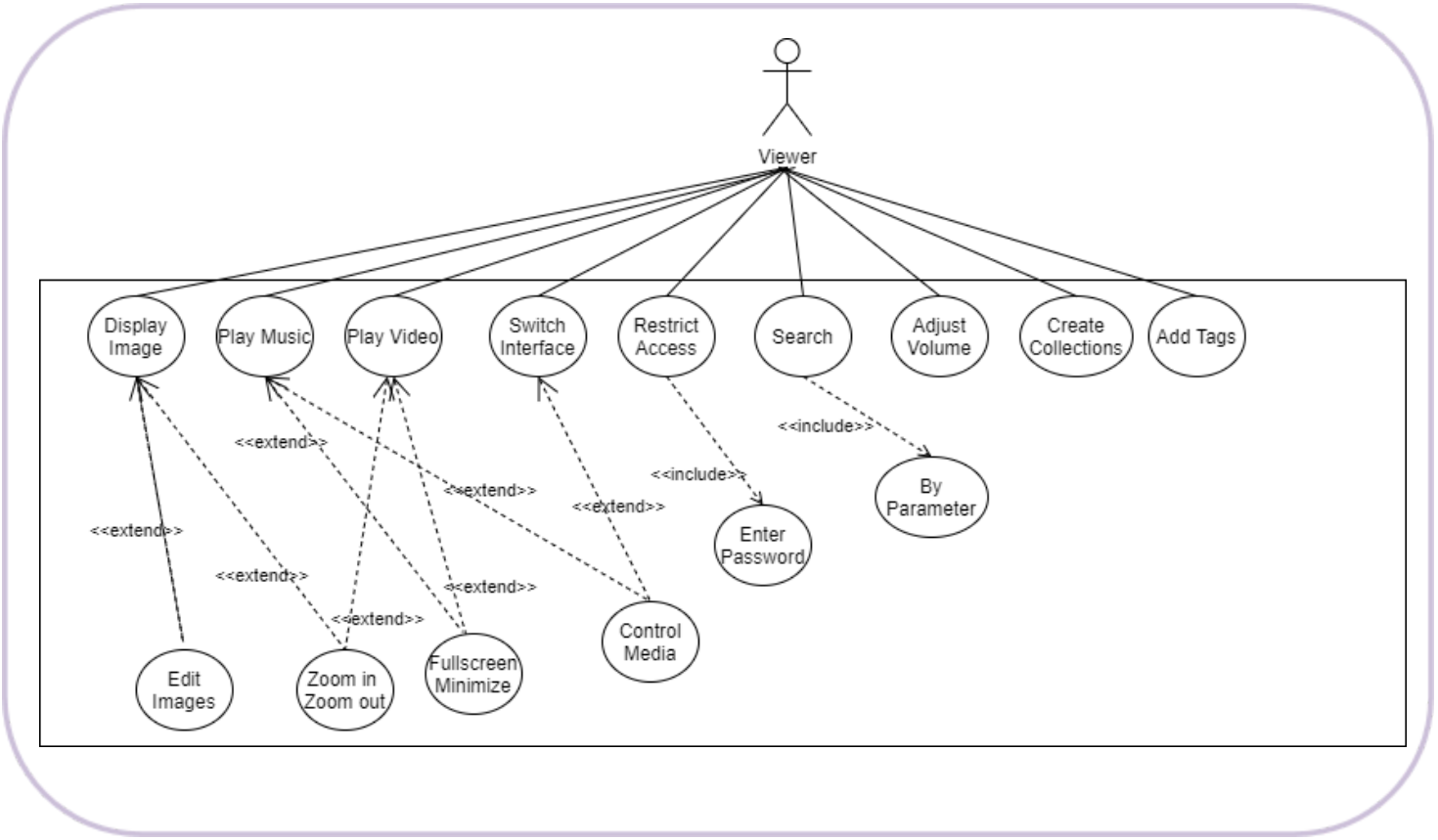
- **Flow of events :** 1-Jack searches for a video with specific date tag.
  2-Jack displays the video.
  3-Jack minimizes the video.
  4-Jack searches for a music with specific tag.
  5-Jack adds these musics to the private playlist.
- **Exit conditions :** None
- **Exceptions :** Invalid tag search
- **Special requirements :** None

Scenario 3: Mary opens the media browser system which is belongs to her grandmother. She wants to open “easy interface mode” by her grandmother’s request and create a new “my grandchilds” album then add photo of herself to this album. She goes to photos section and looks to the section that has photos taken by camera ,she finds that photo and adds to the album that she wants.

Guideline 3:

- **Use case name:** CreateCollection
- **Participating Actors:** Viewer(Mary)
- **Entry Condition :** Opening the media browser
- **Flow of events :** 1-Mary opens the easy interface mode.
  2-Mary creates an album named “my granchilds”.
  3-Mary adds the photo to the album.
- **Exit conditions :** None
- **Exceptions :** Can’t find the photo
- **Special requirements :** None

3.4.2 Use Case Model



3.4.3 Object Model

<Object model section documents in detail all the objects we identified, their attributes, and, operations. As each object is described with textual definitions, relationships among objects are illustrated with class diagrams.>

Step 5 activity

3.4.4 Dynamic Models

<Dynamic models section documents the behavior of the object model in terms of state machine diagrams and sequence diagrams. Although this information is redundant with the use case model, dynamic models enable us to represent more precisely complex behaviors, including use cases involving many actors.>

Step 5 activity

3.4.5 User Interface Mock-ups

<Mock-ups illustrating the user interface of the system and navigational paths representing the sequence of screens.>

Step 4 activity

4 Glossary

<We also maintain a glossary of important terms, to ensure consistency in the specification and to ensure that we use the client's terms. We explain the application domain concepts that need to be defined precisely, as these terms could have a different interpretation in other contexts.>

Step 3, 4 and 5 activity