

**CSE 3105/ CSE 3137**

**OBJECT ORIENTED ANALYSIS AND DESIGN**

**FALL 2020**

**COURSE PROJECT: Media Browser Application**

***System Design Document***

***Group 1***

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# Introduction

The purpose of the Introduction section is to provide a brief overview of the software architecture and the design goals. It also provides references to other documents and traceability information (e.g., related requirements analysis document, references to existing systems, constraints impacting the software architecture).

## Purpose of the System

## Design goals

The design goals represent the desired qualities of Bumpers and provide a consistent set of criteria that must be considered when making design decisions. The following design goals are identified.

* Using C#
* Usability
* Robustness
* Response time
* Customization

# Current Software Architecture

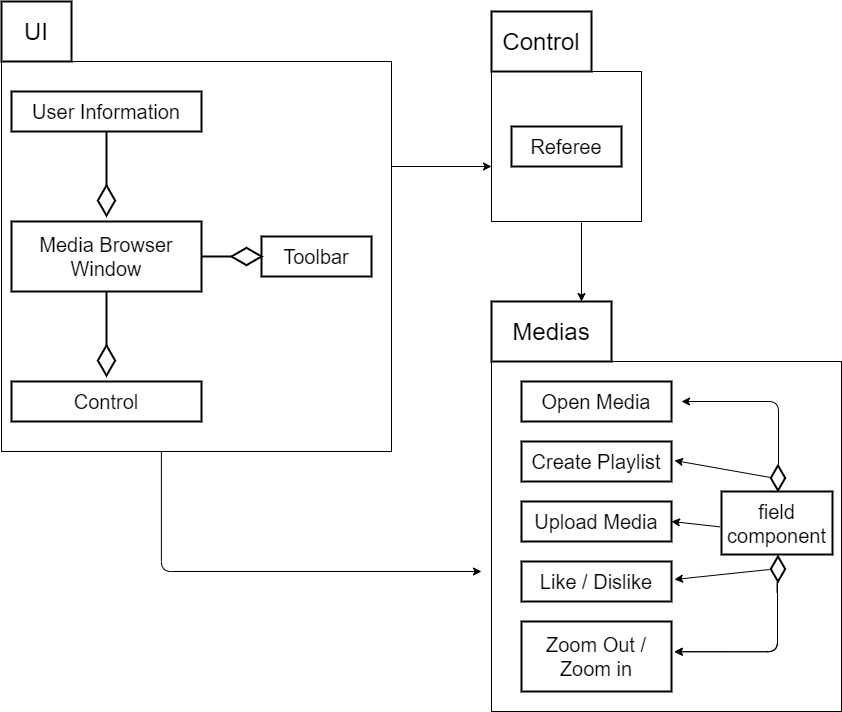
The second section, *Current software architecture*, describes the architecture of the system being replaced. If there is no previous system, this section can be replaced by a survey of current architectures for similar systems. The purpose of this section is to make explicit the background information that system architects used, their assumptions, and common issues the new system will address.

# Proposed Software Architecture

Software architecture refers to the fundamental structures of a software system and the discipline of creating such structures and systems. It functions as a blueprint for the system and the developing project, laying out the tasks necessary to be executed by the design teams. The third section, *Proposed Software Architecture*, documents the system design model of the new system. It is divided into seven subsections:

## Subsystem decomposition

The following UML class diagram gives an overview of the identified subsystems and their relations.



## Hardware/software mapping

*Hardware/software mapping* describes how subsystems are assigned to hardware and off-the-shelf components. It also lists the issues introduced by multiple nodes and software reuse.

## Persistent data management

*Persistent data management* describes the persistent data stored by the system and the data management infrastructure required for it. This section typically includes the description of data schemes, the selection of a database, and the description of the encapsulation of the database.

## Access control and security

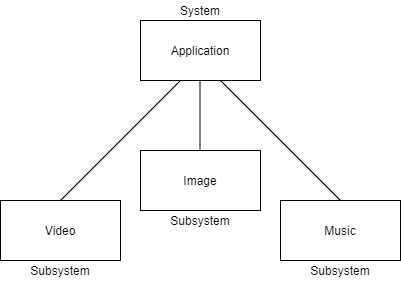
*Access control and security* describes the user model of the system in terms of an access matrix. This section also describes security issues, such as the selection of an authentication mechanism, the use of encryption, and the management of keys.

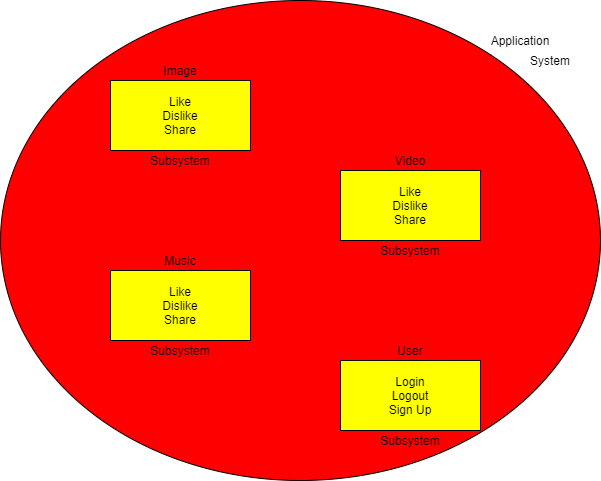
## Boundary conditions

The starting, stopping and installing of the media browser application defines the boundary conditions. Here we must take care of the different operating systems medias is build for.

# Subsystem Services

A subsystem is a single, predefined operating environment through which the system coordinates the work flow and resource use. The system can contain several subsystems, all operating independently of each other. Subsystems manage resources. Subsystems are essentially systems within systems. Because all systems are ordered hierarchically, it is inevitable that subsystems will develop within a larger system. An individual may be a part of multiple subsystems. Common subsystems include parents, siblings, and parent-child relationships. A system is a collection of organized things and combination of parts working together to accomplish a goal. Whereas a subsystem is derived from system and it is an integral part of a larger system.





# Glossary

# References

**[1]** developer.android.com/guide/topics/media-apps/audio-app/building-a-mediabrowserservice

**[2]** developer.android.com/guide/topics/media-apps/audio-app/building-a-mediabrowser-client

**[3]** www.ibm.com/support/knowledgecenter/ssw\_ibm\_i\_72/rzaks/rzaksaboutsbs.htm