Collectomania

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Web site:

http://collectomania.tripod.com

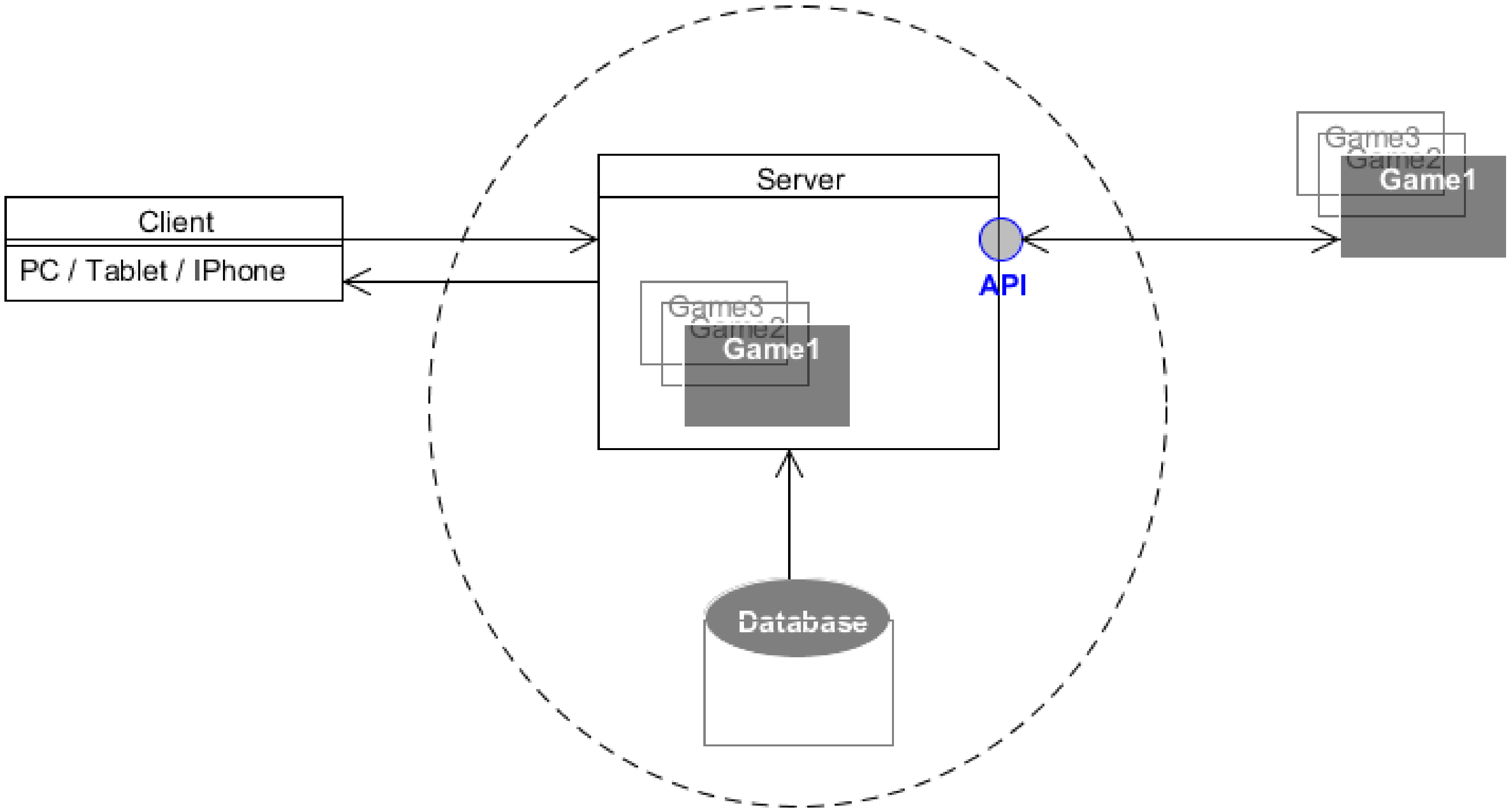
The Problem Domain

- Commercial companies are looking for new ways to attract costumers
- Creating a dynamic gaming and trading experience
- Simple yet attractive digital album collection system

Vision

- Users can collect cards and paste them in albums
- Users can trade cards with other players and play games to win new cards
- Users can get new cards by codes distributed by the managing company
- Managers creates albums and apply competitions

Software context



Software Technologies

- Client Application built in Flex
- Server backend written in Java, using Apache Tomcat.
- MySQL as database service

User Types

- End User: collect cards and play games
- Manager: creates albums and distribute new cards
- System Admin: approves new managers, gives managers privileges

FUNCTIONAL

REQUIREMENTS

General and Administrative Requirements

- Support multiple albums
- Support games
- Enter pin code/ Receive new cards
- Allow administrator to Add/Remove/Update Player
- Decision about album winner
- Saving current state
- Card multimedia
- Code types for receiving cards
- Site Help

User Requirements

- Registration
- Login
- Logout
- Un-registration
- Modify profile details
- Watch album
- Watch card
- Receive code
- Receive card by winning game
- Receive card(s) by exchange chosen of set of cards with another player
- Start new album
- Wish & Trade list
- Notifications
- Invite a friend

Manager Requirements

- **Login**
- **Create new album**
- **Watch album**
- **Watch card**
- **Publish notifications**
- **Publish codes to players**
- **Determine/change the value of the picture**
- **Turn inactive cards to active (according to the set of rules)**
- **Reset Pin codes**

Rules Requirements

- **Rules - Each album will have a set of rules affecting its game play**
- **Set Rules**
- **Modify Rules**
- **Delete rules**
- **Game rules - The system will have game level rules**
- **Album rules - The system will have album level rules**
- **Card rules - The system will have card level rules**

Non- Functional Requirements

Non-Functional Requirements

- **Scalability**: support up to 100 on-line users simultaneously (First stage)

- **Portability**: web application, platform independent, can be used anywhere

- **Security**: pin-codes should be virtually impossible to fake.

- **Stability**: transaction validation, data should remain consistent on error

Technologies for Development

- Server side
  - J2EE
  - Apache Tomcat
  - MySQL

- **Client side**
  - Flex 4

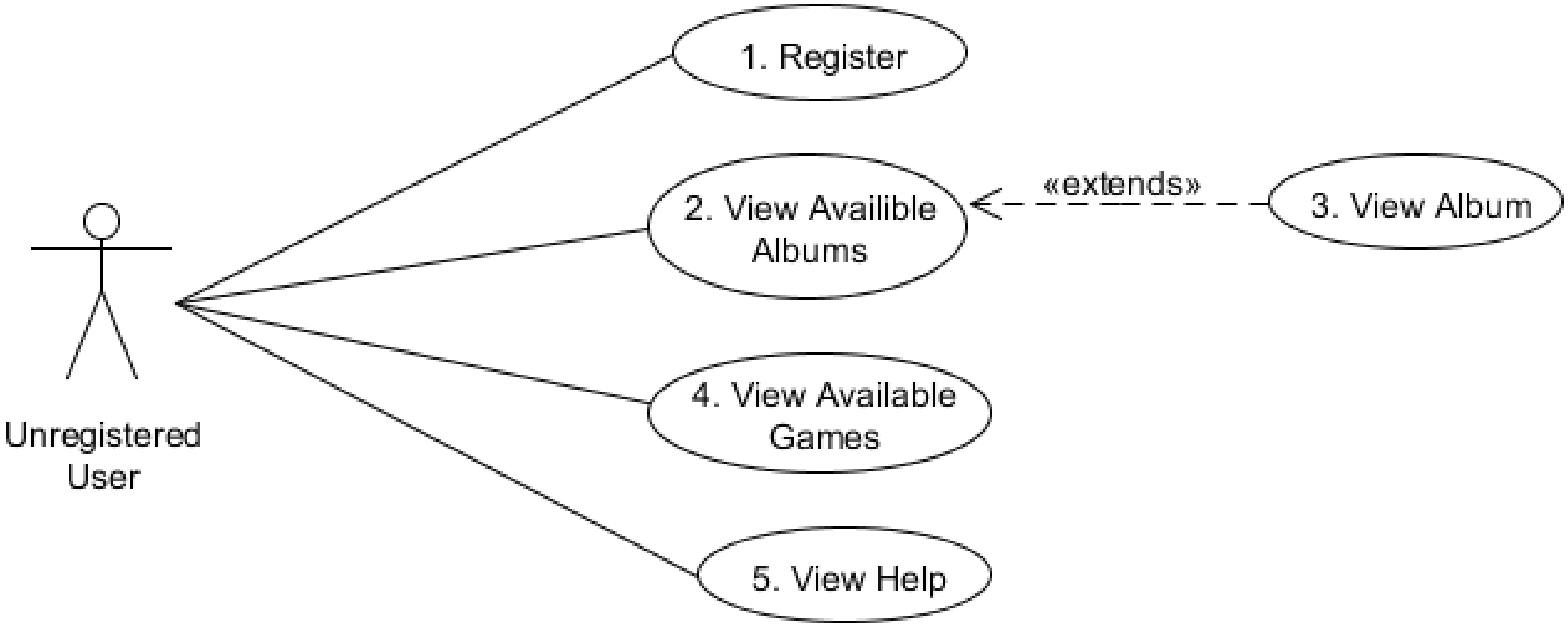
- **Client server communication**
  - BlazeDS or SOAP

Use Cases

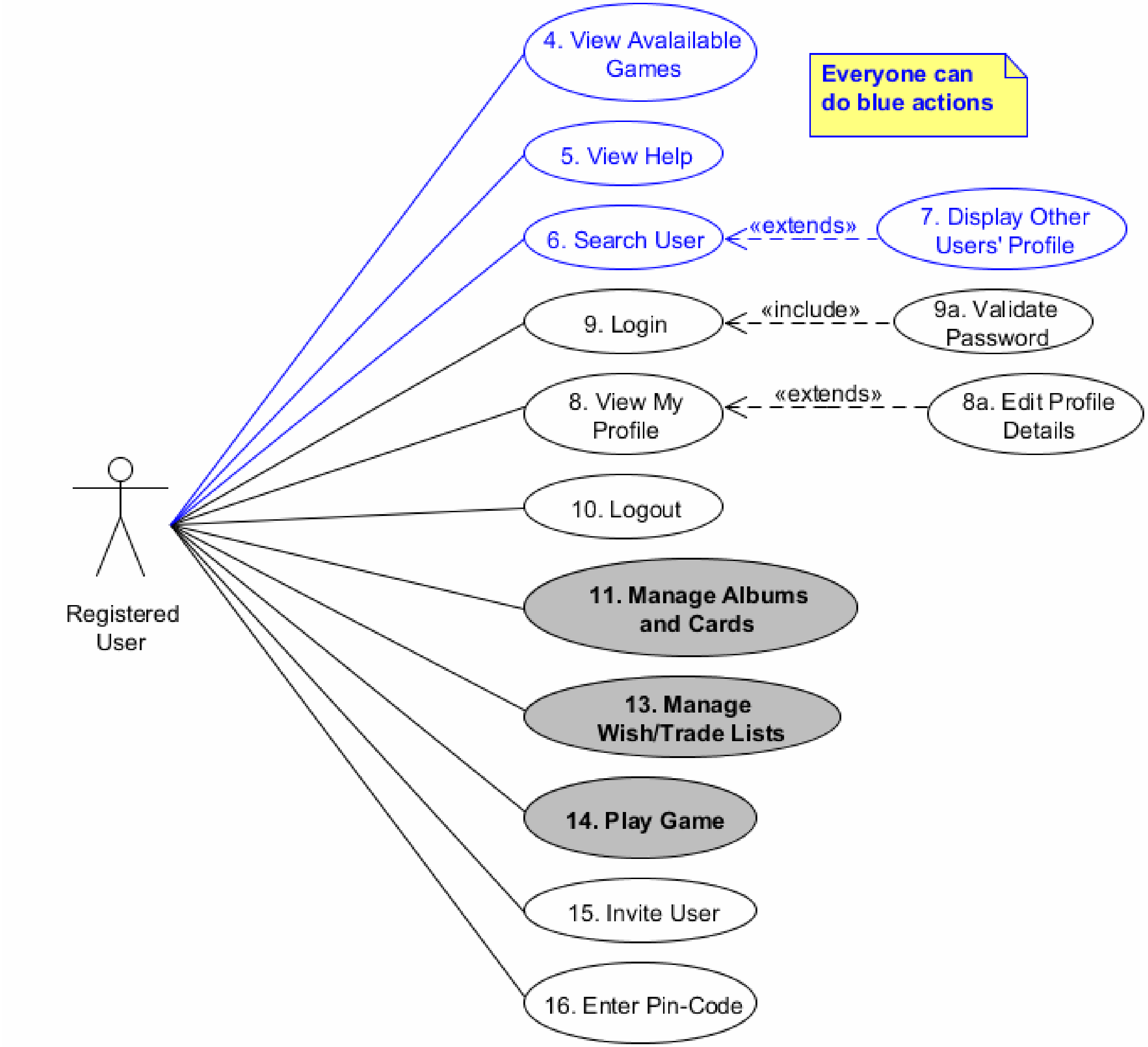
Use Cases - Actors

- Unregistered User
- Registered User
- Manager
- System Admin
- Timer

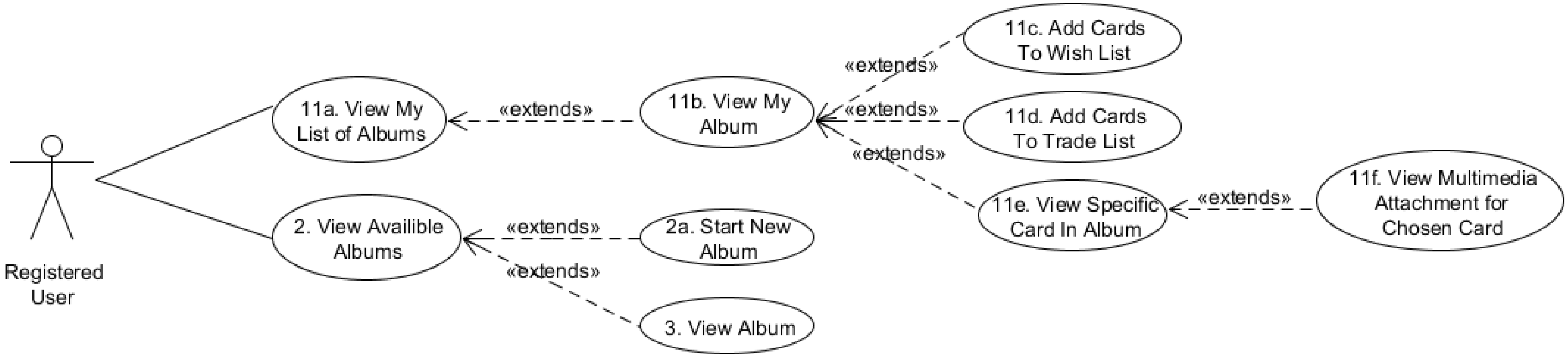
Use cases – Unregistered User



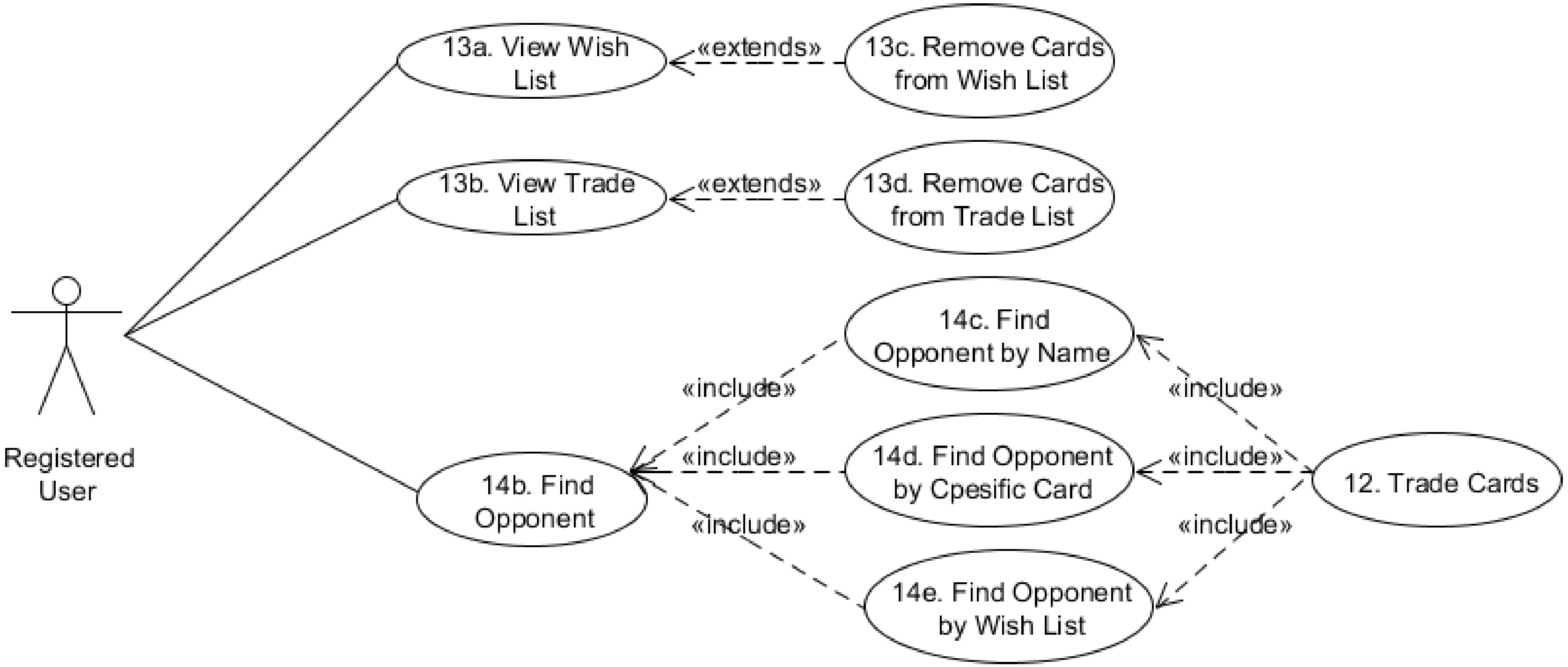
Use cases – Registered User



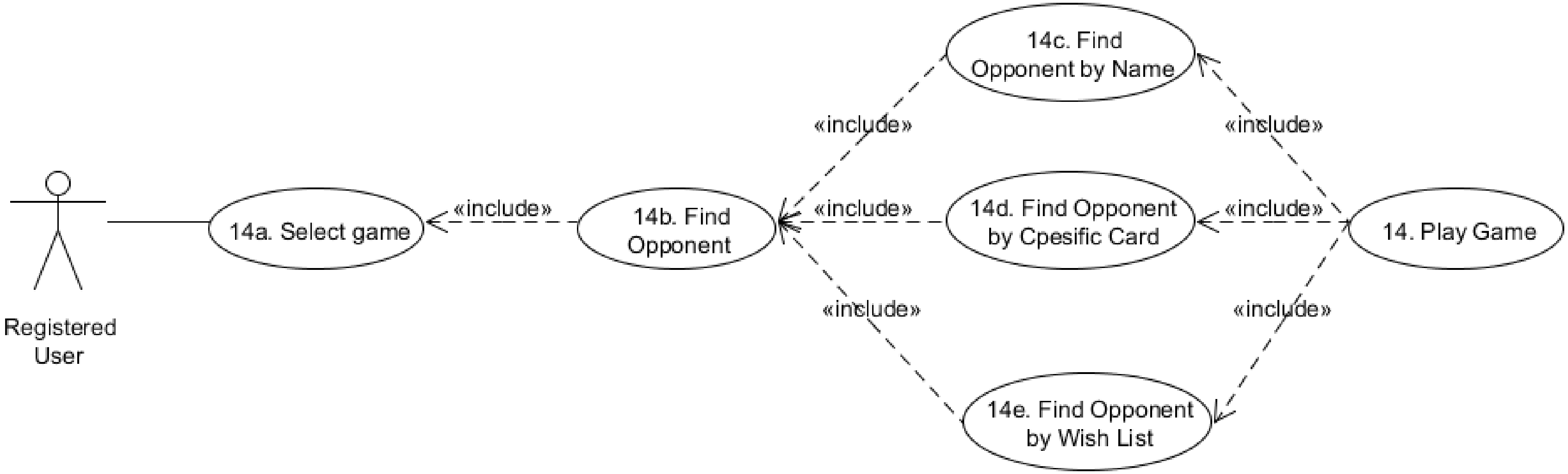
Use cases – Registered User Manage Albums and Cards


Registered User
11a. View My List of Albums
«extends»
11b. View My Album
«extends»
11c. Add Cards To Wish List
«extends»
11d. Add Cards To Trade List
«extends»
11e. View Specific Card In Album
«extends»
11f. View Multimedia Attachment for Chosen Card
2. View Availible Albums
«extends»
2a. Start New Album
«extends»
3. View Album

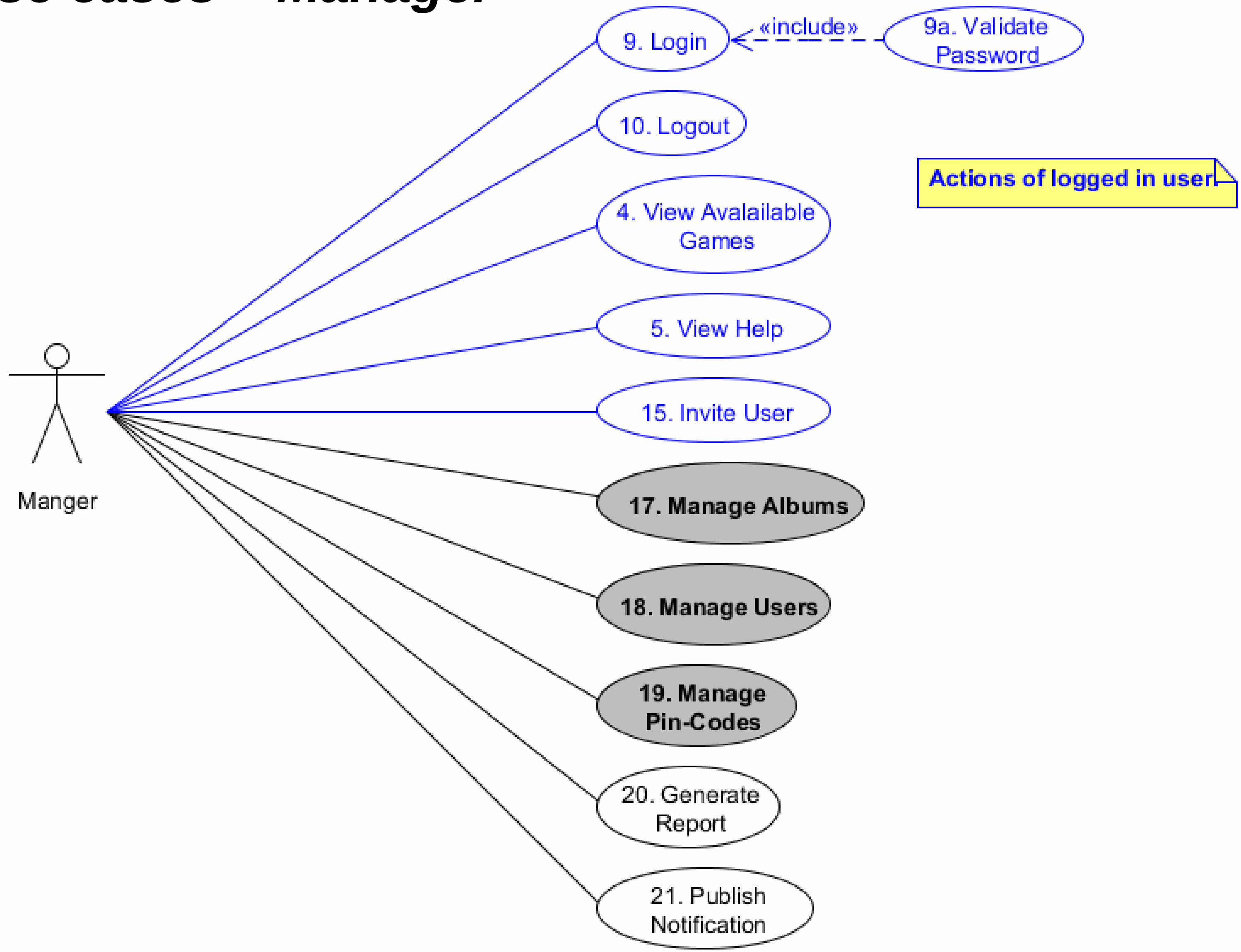
Use cases – Registered User
Manage Trade/Wish Lists



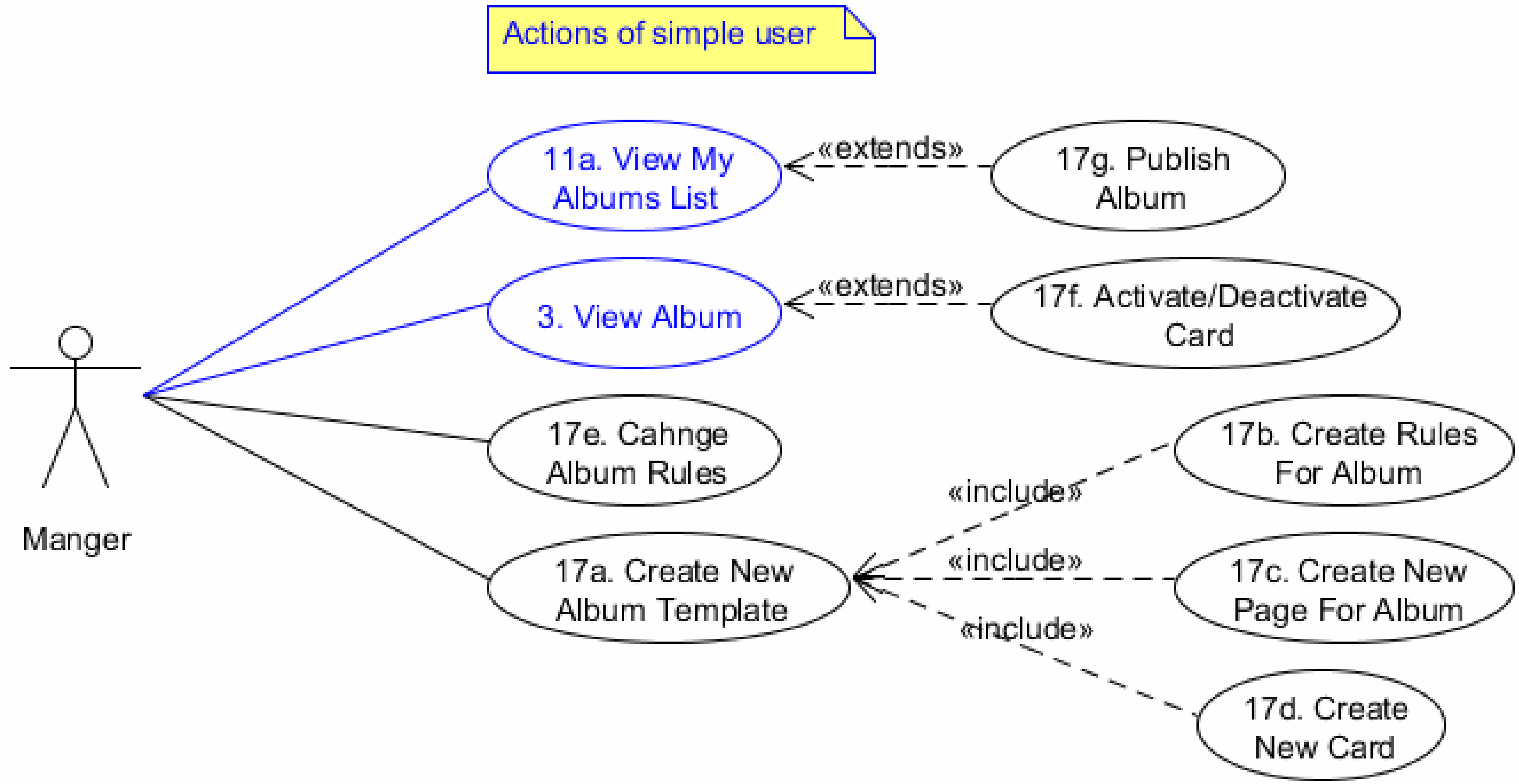
Use cases – Registered User
Play Game



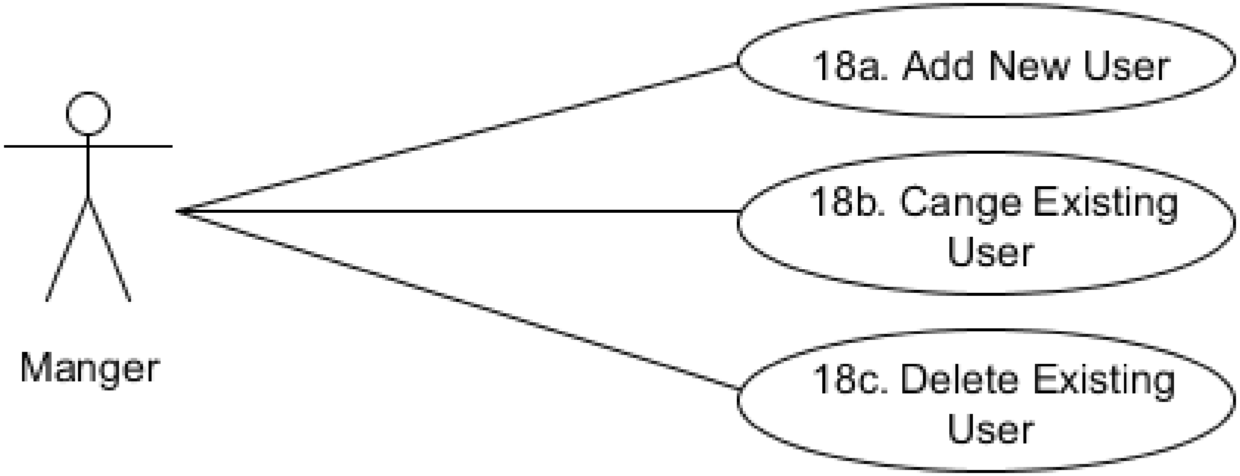
Use cases – Manager



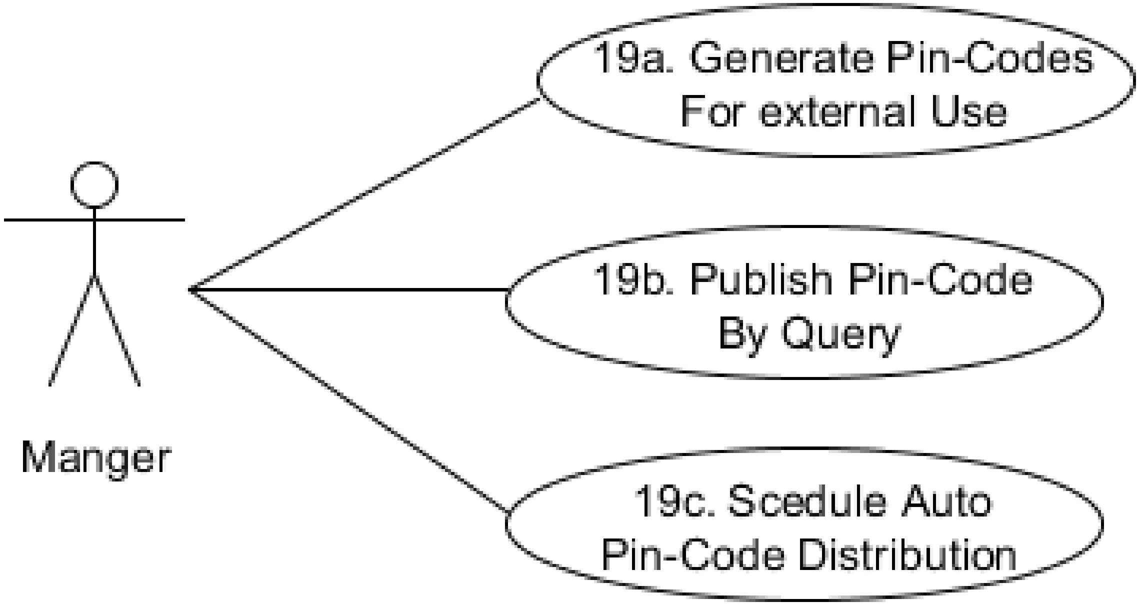
USE CASES – MANAGER
MANAGE ALBUMS



Use cases – Manager
Manage Users

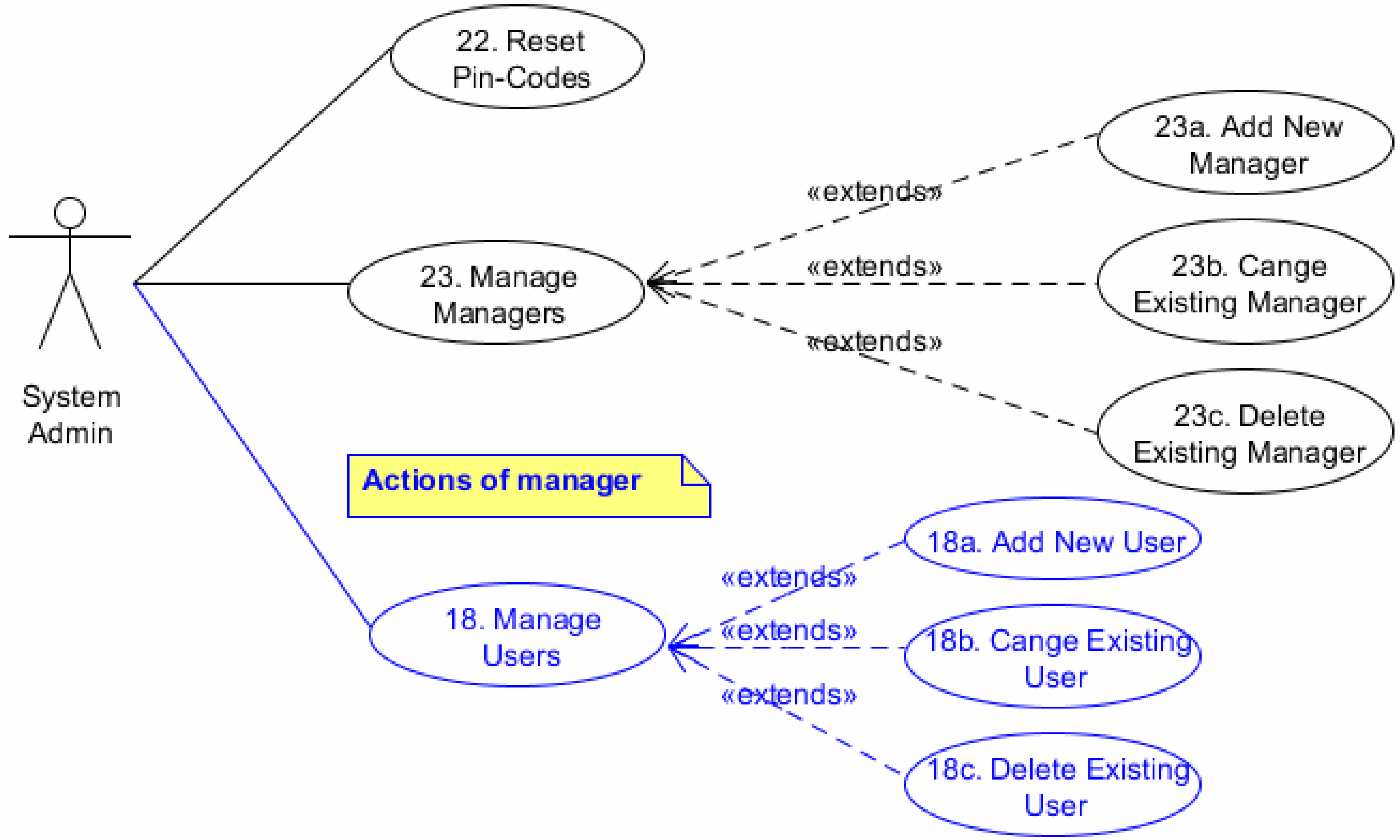


USE CASES – MANAGER
MANAGE PIN-CODES

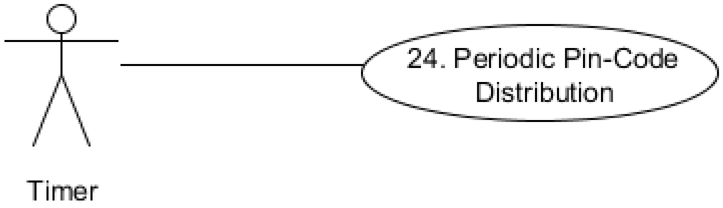


19a. Generate Pin-Codes For external Use
19b. Publish Pin-Code By Query
19c. Scedule Auto Pin-Code Distribution
Manger

USE CASES – SYSTEM ADMINISTRATOR



USE CASES – TIMER



First Prototype

- Implemented actions
  - View list of albums
  - View specific album and collected cards
  - Scroll album pages
  - Drag and drop cards to the right place
  - View multimedia attachment of each card

- Goals
  - To improve flow of described use-cases
  - To design user friendly graphical interface as mush as possible
  - To make decision about using BlazeDS or SOAP as communication layer
  - To get experience with Flex4 and action script.

First Prototype – Risk assessment

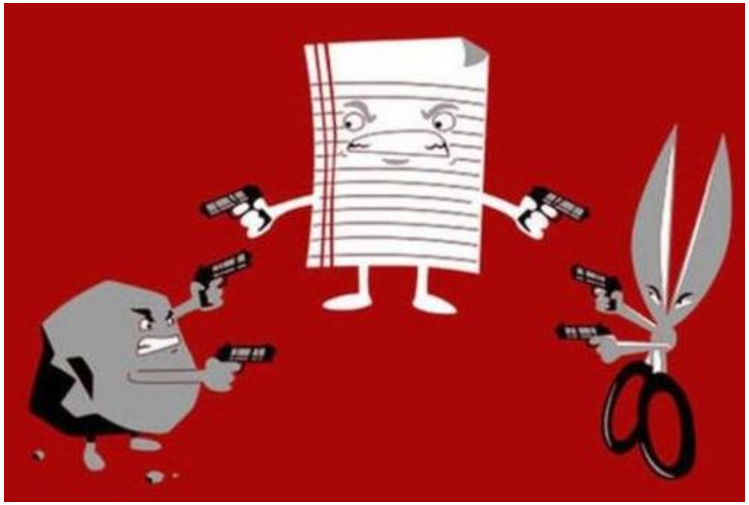
Risk assessment	Solution
Interactive and attractive UI development	As it was mentioned above, one of the goals is to provide user friendly interface and choose the most convenient platform for development. In order to make right decisions we checked some options and read a lot about developing such interactive web applications as we want.
Learning new technologies (Flex 4)	We started to learn Flex. Moreover, our technical advisors (Asaf and Eitan) help us and support us during development process.
Keep to the time scheduling	We won’t develop the entire system. There is implementation priority for each requirement and rule in description tables

Mini Games

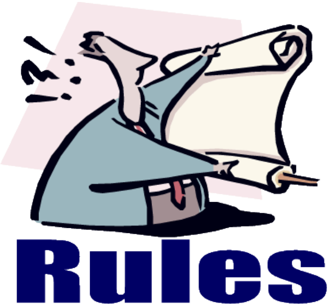
- One way of exchanging cards in Collectomania is to play on set of cards with another user.
- Each mini game has its own rules, but there are some general rules for all of them.
- The winner takes his opponents cards in addition to keeping his own.

Mini Game

- As an example, our project will have the game **Rock-Paper-Scissors** implemented



Rules



- One of the core features of Collectomania is the ability to dynamically configure the behavior of each album.

- Collectomania contains several behavioral rules that can be applied on an album. When album is created, the manager selects several rules that will be applied to the album.

- The rules platform allows more flexible definitions and grants the end user with new game experience every time.

Pin-Codes

- Pin-Code is a character string that users can use to load their account with new cards. (To avoid code prediction, each code is encoded with SHA1)

- There are many possible ways to achieve new code, for example:
  - Send/receive SMS.
  - Printed inside bottle caps.
  - Album manager can send codes by e-mail. And so on..

- Each code has a action type (Grant fix number of cards, Grant dynamic number of cards…)

Questions?

The End