# Requirements analysis of ViSmart

1. OBJECTIVE/GOALS

1.1 Objectives

- providing ease of access to video streams of courses and seminaries for students and teachers
- facilitating the learning/teaching process

1.2 Goal

Our project will provide teachers with an easy way to share their courses and materials with students. The application will have an intelligent video streaming system that detects if there are any noise issues and will automatically enable subtitles and the teacher will be notified about the problem. All the courses will be recorded and the students will have access to them any time. Based on the presentation subject, the application will suggest other relevant online resources for students (software, articles, code, examples, images, sites). When the courses will be saved into the database, the application will get rid of unnecessary pauses of speech, irrelevant talks or other off-topic questions.

2. COMPONENTS

2.1 Video Streaming Platform

- This will be the main component of the application because all the other functionalities are related to this module. This component will provide screen sharing functionality, will have a chat integrated, a variety of video and audio settings, will check for audio disturbances and it will activate subtitles if needed. Also it will check if relevant materials are provided according to courses topic.
- This component will grant access to users into specific classrooms and the teacher will be able to accept, reject or kick a student from the meeting.

2.2 Classroom

- This component is responsible with the creation of new classrooms and video lessons by the teacher.
- In this module the participants can write offline messages, will be able to view past courses as well as the provided materials for them.
- All the data involved in those processes will be read from the database and also stored into it.

2.3 Rest Application

- The operations made into the application will use a REST API to store the data into the Database.
- Before videos are saved into the Database they are processed using the API and then it will be saved into the Database.
- Also into the database it will be saved the offline messages for further display.

3. USER ROLES

3.1 Members

- The teacher and the students will have member role, and based on this role, they will have different functionalities and rights into the application.

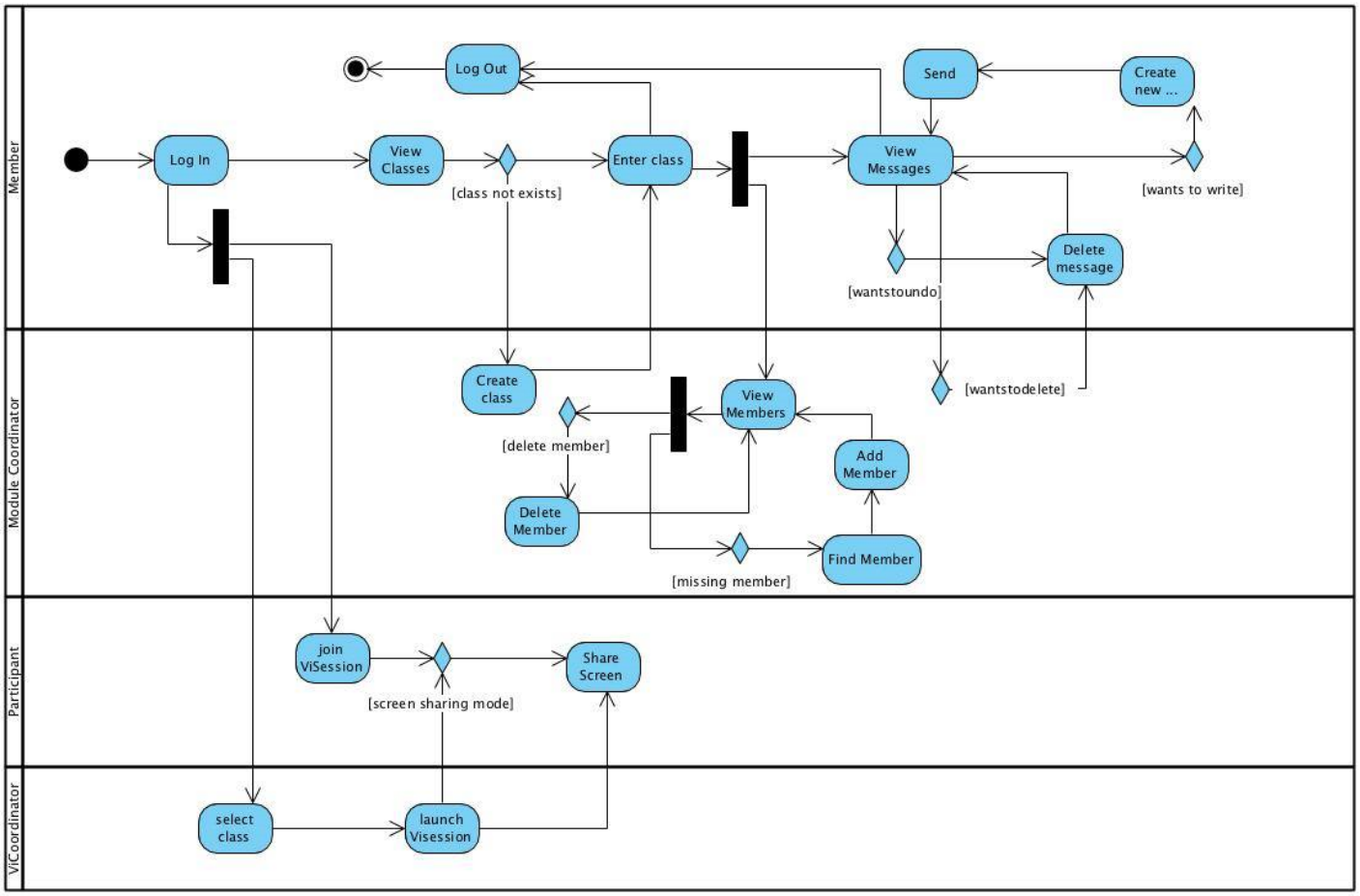
3.2 Admins

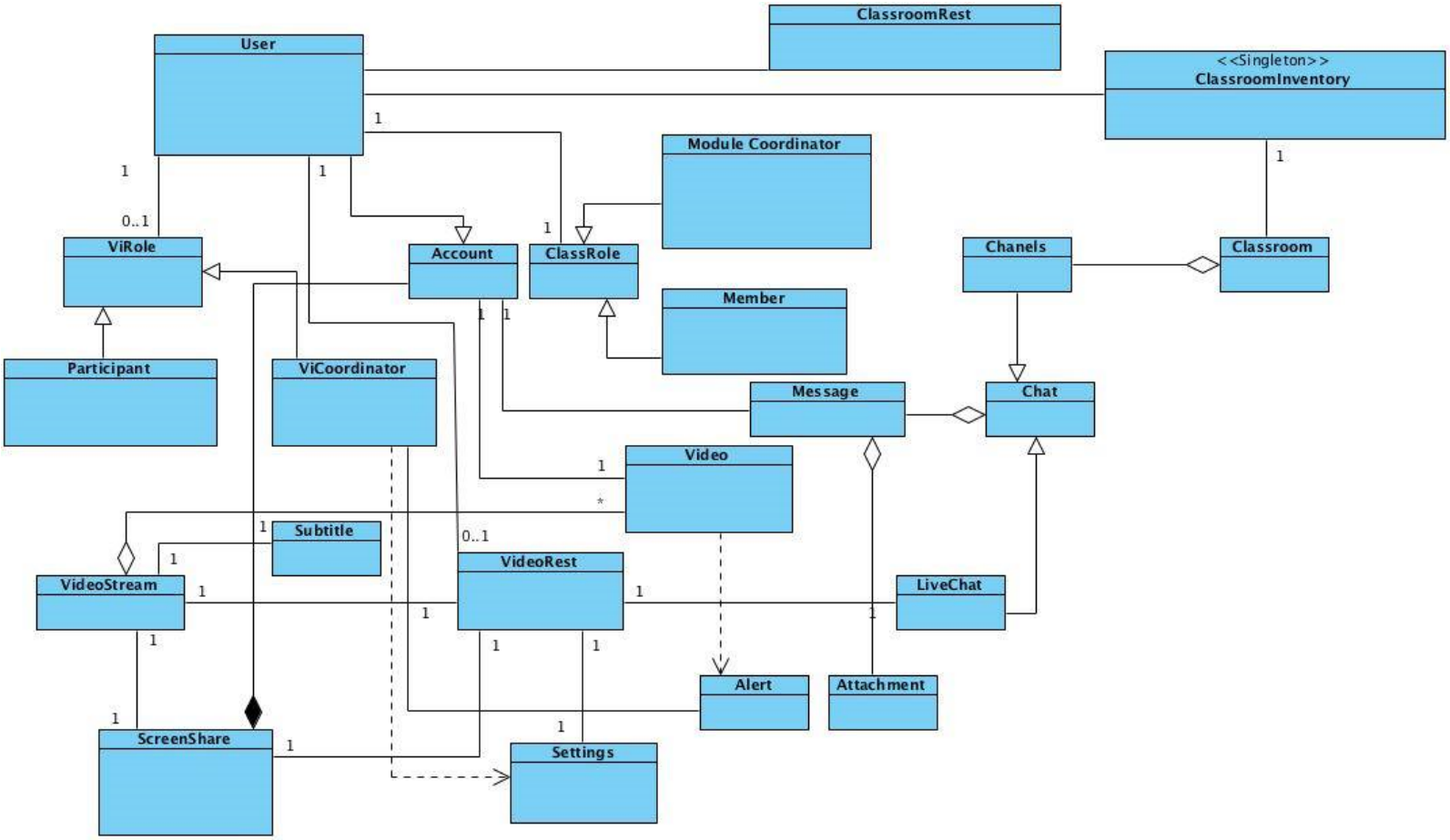
- The admins will be able to create accounts of all types.

4. USE CASE SCENARIOS

- Actors:
    - Students who will participate at/watch video lessons, will send messages to other members or to access relevant materials for various courses.
    - Teachers will initiate video lessons, provide relevant materials and answer chat questions for students.
- Scenarios
    - Admin creates accounts for all students and teachers.
    - Students log into the application, then they will enter the scheduled classroom.

- Students log into the application and will send messages to other members.
- Students log into the application and will access provided materials and will watch recorded courses.

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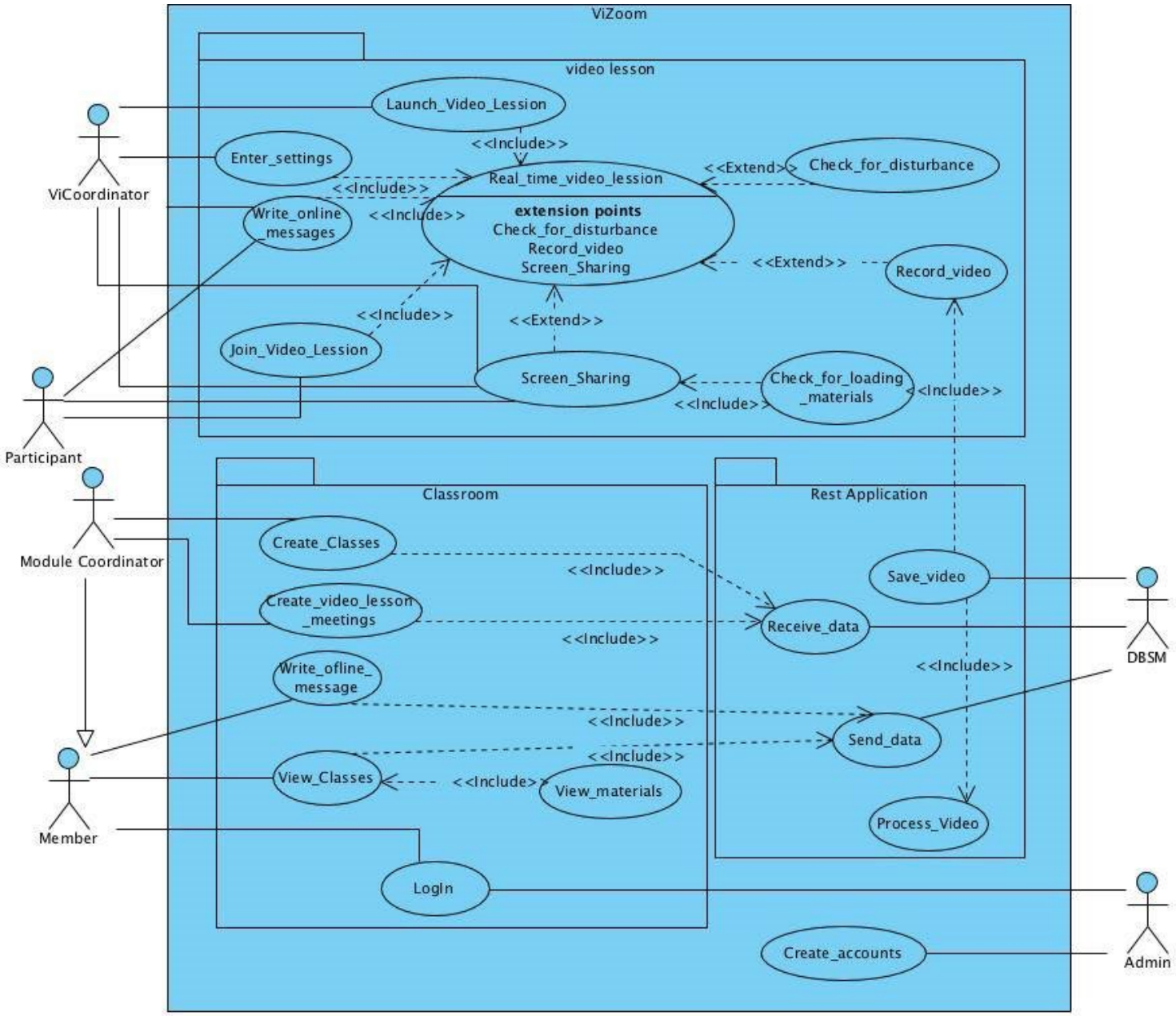
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