**University of British Columbia, Department of Computer Science**

**CPSC 304**

**2016 Winter Term 1**

**Project Part  Proporsal**

**Group Name: DogeTV DB Team**

**Group Members:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Student Number** | **Unix ID** | **Email Address** |
| Caiyi Ku | 48449136 | d1b9 | imkcy@qq.com |
| Ziyu Wang | 56125131 | j8h0b | richard.ziyu.wang@gmail.com |
| Zhixuan Xu | 53854121 | f3v9a | xuzhixuanventus@gmail.com |
| NULL | NULL | NULL | NULL |

By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia.

**Description**

The database system that we are going to implement in this project is for a typical live streaming video platform (like Twitch), called herein **DogeTV**. The rest of this section provides a detailed description of the basic operations which the users of the database system expect to perform.

The main function of DogeTV is to provide platform for video game-related content, including personal streams of individual players, and gaming-related talk shows to its users. Each broadcast Channel has been assigned a unique ID, and has a title, a description, language, a count of viewers and a status (which can be online/offline/banned). DogeTV keeps two types of broadcast channel: Game and Shows. The Game channel is classified by gaming platform (i.e. PS4, XBoxOne, PC and Mobile), and the Shows channel is classified by theme (i.e., gaming talk show, creative and singing).

DogeTV has two types of user: Registered User and Guest. Each user must have a unique user name. The user name for guests are randomly generated by the server. The registration requires a unique username, a password and the gender. Both of registered user and guest can watch the live streaming, but only registered users are allowed to follow other users and chat in a channel by sending ChatMessage, which is identified by the senderId and the timestamp, and has some content associated with it. As a registered user, it can follow many other users.

Also, there are two special types of registered user: Moderator and Streamer. Moderator has the right to mute other users so that muted users cannot send chatMessage in certain channels (the ban has a start time, duration and end time). Streamer is able to do live streaming in a channel. A channel can be set to be online(streaming) or offline by the streamer hosting it. The type of the stream can also be set by the streamer. A Streamer can accept donations from other registered users. Each donation consists of a unique transaction ID and the amount.

The streamer can also check for donations received for a given time span. Streamer is also eligible to grant other registered users the privilege as a Moderator.

The manager of the website can ban a channel if the terms of services is violated by the streamer, for example, the content of the stream is inappropriate.

The system will be used by two types of user (with associated functions):

* **registered users**:
  + join a channel
  + make donations
  + follow other registered users
  + check for followers
  + send chat messages
  + check donations made/received
  + search for channels of specific type
  + search for specific user
* **guest**:
  + join a channel
  + register
  + search for channels of specific type
  + search for specific user
* **moderator**:
  + mute other viewers for a given duration
* **streamer**:
  + start/close stream
  + grant moderator privileges
  + change channel info (i.e. type, description, title and language)
* **admin**:
  + add/delete users
  + create channels for a streamer
  + allow a registered user to become a streamer
  + ban channels which violates the term of service
  + reactivate banned channels
  + get top channels
  + get top channel types

When a user starts the system, the program asks the user to identify their class and provide a password. Then the system starts up the appropriate menu for the current type of user. Our system won't deal with users and passwords.

**Platform: Oracle SQL**

**Programming Language: Java**