

## System Design for Project StackOverFlow

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Architecture diagram

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Class name: Login

Parent class (if any): None

Subclasses (if any): Authenticate

Responsibilities:

- \*Allow the user to log in with their registered username and password

Collaborators:

- \*Register

- \*Database

Class name: Authenticate

Parent class (if any): Login

Subclasses (if any): None

Responsibilities:

- \*Accesses the database and determines whether their username/password combination is correct

- \*Redirect the user to the home page if the combination is correct

- \*Prompt the user with an error message if the combination is wrong

Collaborators:

- \*Database

Class name: Register

Parent class (if any): None

Subclasses (if any):

Responsibilities:

- \*Allow the user to create an account on the site

- \*Registering the user creates an entry in the database

- \*Allows the user to choose their user name/ID/password

Collaborators:

- \*Login

- \*Database

Class name: Database

Parent class (if any): None

Subclasses (if any): None

Responsibilities:

- \*Store the username/password combinations

- \*Store new sets of username/passwords from registration

- \*Stores User ID's that other users can use to connect with each other

- \*Stores User friend list

Collaborators:

- \*Login

- \*Register

- \*Add Friend

Class name: Player

Parent class (if any):None

Subclasses (if any)

Responsibilities:

- \*Plays youtube videos from a supplied link at the same time with a partner

- \*Allows the user to control the video (quality, start/stop, etc.)

Collaborators:

- \*Database

Class name: add\_fri

Parent class (if any):None

Subclasses (if any)

Responsibilities:

- \*Allow the user to add other users as friends into their friend list

- \*Update the database whenever the user added a friend,

Collaborators:

- \*Database

Class name: remove\_fri

Parent class (if any):None

Subclasses (if any)

Responsibilities:

- \*Allow the user to remove other users from their friend list

- \*Update the database whenever the user remove a friend,

Collaborators:

- \*Database

Class name:Streamie-Server

Parent class (if any):None

Subclasses (if any)

Responsibilities:

- \*Allow user to Login, Register, Manage Friend List

- \*Update the database

Collaborators:

\*Login, Register, Friend List

\*Database

Class name: Chatroom

Parent class (if any):None

Subclasses (if any)

Responsibilities:

\*Add/remove users to the chat room

\*Send and view messages to another user

Collaborators:

\*Friend List

\*Database

Class name: User Profile

Parent class (if any): Login

Subclasses (if any): Modify User Profile

Responsibilities:

\*View user profile information

\*Link to edit user profile

Collaborators:

\*Friend List

\*Database

Class name: Modify User Profile

Parent class (if any): User Profile

Subclasses (if any): None

Responsibilities:

\*View user profile information

\*Edit user profile

\*Update new profile in database

Collaborators:

\*Friend List

\*Database

Class name: sync-master

Parent class (if any): None

Subclasses (if any): None

Responsibilities:

- \*Stream Youtube videos

- \*Update this Master page's Youtube player's status, user status, and video source to sync-video-server

- \*Receive other Viewer pages' Youtube player's status, user status from sync-video-server

- \*React accordingly to data received from sync-video-server

Collaborators:

- \*sync-video-server

Class name: sync-viewer

Parent class (if any): None

Subclasses (if any): None

Responsibilities:

- \*Update this user status to sync-video-server

- \*Receive a Master page's Youtube player's status, user counts, and video source from sync-video-server

- \*React accordingly to data received from sync-video-server

Collaborators:

- \*sync-video-server

Class name: sync-video-server

Parent class (if any): None

Subclasses (if any): None

Responsibilities:

- \*Receive Master pages' data about players' status, user status, and video source

- \*Receive Viewer pages' data about user status

- \*Broadcast received data from Master pages to all related Viewer pages

- \*Log legal requests

- \*Log illegal requests and ignore them

Collaborators:

- \*sync-master

- \*sync-viewer

