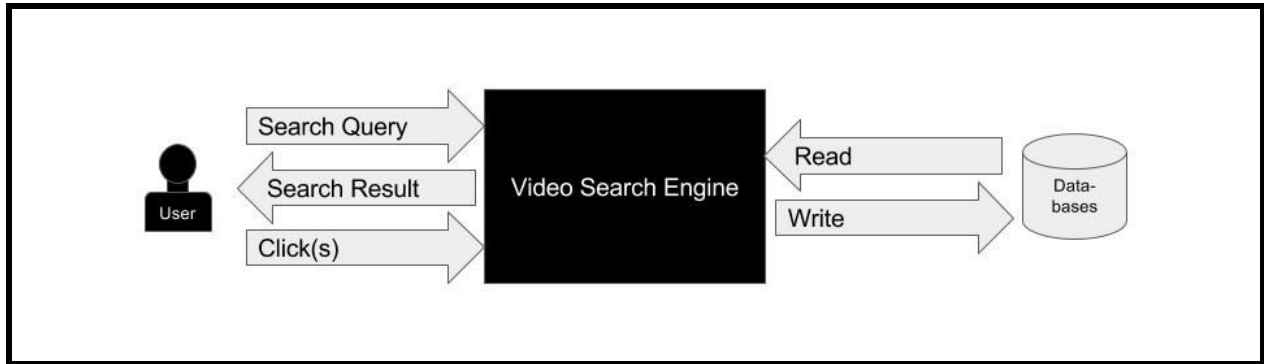


CS 345 Post Mid Sem Assignment 3

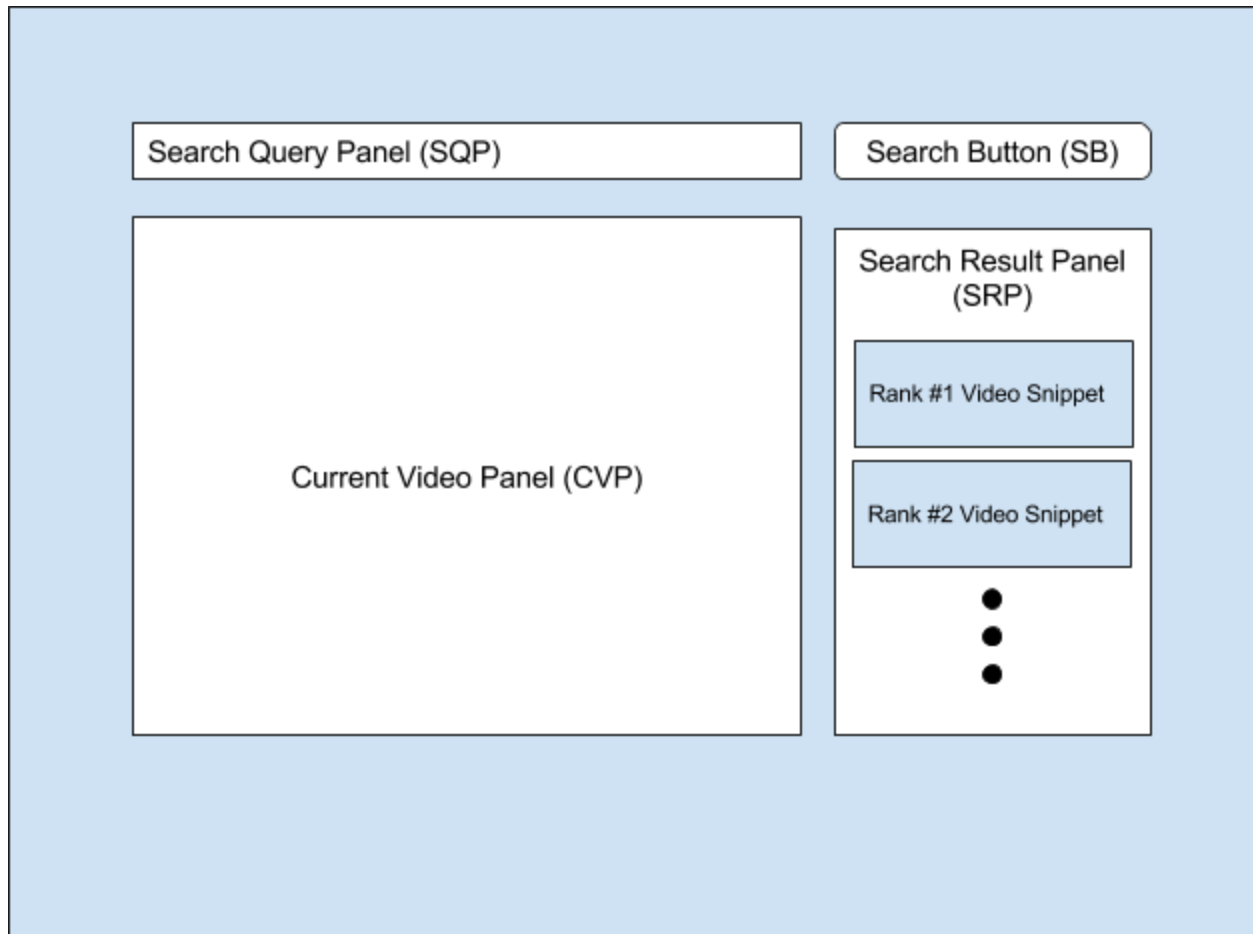
Problem Statement

This is a group assignment. The group formation details are given in the section 'Group Formation'. Your objective is to build a **video search engine** application with a **GUI**.



The following features are mandatory:

- The **application** must be combinedly managed by all three database programs.
 - MongoDB should be used for indexing the video files. Use the video dataset which is provided for post mid sem assignment 1.
 - Neo4j will be used for managing the relationships between the videos and entities in the videos.
 - MySQL will be used to store relational information.
- The **GUI** should at least have the following components:
 - Search Query Panel (SQP) - for submitting queries to search videos
 - Search Button (SB)
 - Search Result Panel (SRP)
 - Current Video Panel (CVP)



- Initially all three panels would remain empty.
- When the user inputs a search query in SQP and clicks on SB, the GUI should display a list of **relevant videos** in SRP. The search query can be a single word query or multi-words query. Eg. 'Sachin'. Number of videos in SRP is at your discretion. Each result should be displayed in the result list with appropriate snippets, such as - title of the video, thumbnail image, and short description. If user clicks on a video snippet, then details (eg. description, like count) of the video should be shown in CVP. In addition, SRP would be refreshed and the list of **related videos** i.e. videos related to the current video in Neo4j database would be displayed there. You can choose the type(s) of relationship to improve search results.
- The click-through information should be stored in MySQL database. In a click-through log, traditionally relevant information about each of the user's clicks against a query is stored. In general, every transaction in the relation may capture information such as query, video ID, rank of the video in the search result against the query, user ID <if available>, timestamp of click etc. You may additionally consider any other relevant information that you feel important for improving the search results. Improvement includes, but not limited to, the following:
 - Inclusion or exclusion of a video in the search result

- Change in the rank of a video in the search result

Group Formation

- Each group can have min 3 and max 4 members.
- Cross-departmental groups are allowed.
- Once your group is decided, submit members' details at the Google form just once:
<https://goo.gl/forms/JKzkbJGH39YEAdpD3>
- Only one member of the group needs to fill up the form.
- Group information submission deadline: **11:59 PM, Apr 8, 2017, Saturday**.
- If you are unable to form a group, you shall be randomly allocated to a group.
- A **Group ID** would be generated for each group and posted in Piazza on **Apr 11, 2017, Monday**.

Evaluation

- Code submission: Keep all the required files in one folder and zip it. Rename the zip file to '<your group ID>.zip'. Then upload that file in any online repository, like - Dropbox. Submit the link just once using the Google form, which will be provided on **Apr 11, 2017, Monday**. The submission will be open till **11:59 PM, Apr 20, 2017, Thursday**. Only one member of the group needs to perform the submission.
- Evaluation session will be conducted on **Apr 23-24, 2017** at CSE Seminar Room. Each group will be provided a 5-minute slot to give a demo of their application. It will be followed by a 5-minute Q&A session by the Instructor and the TAs. The slot timing will be intimated one day before the evaluation session.
- All the members of a group must be present during the evaluation. But the demo can be given by a subset of members.
- The search engine should be accessible from anywhere in the intranet through browser. The demo needs to be given on a computer specified by the Instructor; not on your laptop. During the demo, the Instructor and the TAs must be able to access the search engine as well as the code link (provided by you in the corresponding Google form). Any dissimilarity between the demonstrated search engine and the code will ensure heavy penalty.
- The total marks for every individual is **20 marks (Group Marks + Individual Marks)**.
 - **Group Marks:** (10 marks) [Each member of the same group will be awarded the same marks]
 - Databases design: 2.5 marks
 - GUI design: 2.5 marks
 - Additional features: 5 marks

- **Individual Marks:** (10 marks) [It will be decided based on the Q&A session]
 - Databases design: 2.5 marks
 - GUI design: 2.5 marks
 - Additional features: 5 marks
- Code plagiarism will be penalized heavily.
- Please note that higher weightage is given to **additional features** section in marking scheme. So be creative in your approach. Additional feature can be any feature that you as a user will like to have. For eg. recommended videos based on click history of a given user.

Important Dates

Group information submission deadline	11:59 PM, Apr 8, 2017, Saturday
Generation of Group ID	Apr 11, 2017, Monday
Code link submission	Apr 11, 2017, Monday till 11:59 PM, Apr 20, 2017, Thursday
Evaluation session	Apr 23-24, 2017 at CSE Seminar Room