**Connect to the YouTube API:**

Used YouTube API to retrieve channel, playlists, video and comments data for the required channel by giving the channel Id as the input. We can use the Google API client library for Python to make requests to the API.

**Store data in a Mongo DB data lake:**

Once you retrieve the data from the YouTube API, you can store it in a Mongo DB data lake. For this we need to create a connection between the Python and Mango DB. After creating connection we will upload all the data in Mango DB Data Lake.

**Migrate data to a SQL data warehouse:**

After collected data for multiple channels, you can migrate it to a SQL data warehouse. Here I have used MySQL database. For this we need to create a connection between the Python and our local host of MySQL database. We will be creating individual tables for the channels, playlists, videos and comments and insert the corresponding data to the tables.

**Query the SQL data warehouse:**

All the data will be stored in the MySQL data base in the form of rows and columns. Through which we need to query and get which are all stored in the database tables. And even we need to find the answers for the questions based on the requirement. Here for sample we have added 10 question to which the corresponding answers will be displayed by query to that specific table or if required we need to join the table and need to find out the answers.

**Query the SQL data warehouse:**

Finally, you can display the retrieved data in the Stream lit app. The stream lit app consists of “**Extract**” button to extract all the data about the YouTube channel by giving channel ID as input. It has “**Migrate to SQL**” button through which we can upload the data from the data lake to SQL database as tables and columns. It has a radio button through we can see the required table and an option to select the question and the answer will be displayed simultaneously.