Experiment No: 2

Aim: Data Collection-Select the social media platforms of your choice (Twitter, Facebook,LinkedIn, Youtube,Web blogs etc) ,connect to and capture social media data for business (scraping, crawling,parsing).

Theory :

- Crawling: Involves going though specific websites and related links, more likegoing through a collection of things and inspecting them. This is the first stageof scraping and Parsing. basically visiting and going through a site could be termed crawling that is if being done by a bot; web crawler.
- Scraping: It is a form of copying, in which specific data is gathered and copiedfrom the *web*, typically into a specified storage location.
- Parsing: This involves breaking down the above scraped data into smaller bitsof it, this is to aid understanding of the scraped data. This stage is employed in various fields of data extraction and mining.

Steps:

- **Step1** :
  - Get API Key - Go to the *Google Cloud console • (https://console.cloud.google.com/) and sign in with your Google Account
  - Click the project drop-down menu in the top bar and select or create the projectyou want to use.
  - Click the hamburger menu in the top left and select APIs & Services >Select Youtube Data V3 API> Credentials.
  - Click the Create credentials button and select API key.
  - The API key will be displayed in a pop-up window. You can click the RESTRICTKEY button to restrict the API keys usage, such as by IP address or referrer.
  - Click the COPY button to copy the API key to your clipboard.
    - You can use the API key in your application to access the Google Cloud APIs. Be sure to keep the API key confidential, as it can be used to access your Google Cloud resources.
- **Step2**
  - Search Youtube Video for scraping comments.
  - Copy the Youtube Video Id
  -

Program Code:

```
import requests
video_id = "iX-U9HLRnuk"
```

```
api_key = "AIzaSyDL2_rH___2JrGPYAN71ryuO9fG3WxXyT04" #
Retrieve video information
video_info_url =
f"https://www.googleapis.com/youtube/v3/videos?part=snippet&id={video_id}&key={api_key}"
video_info_response = requests.get(video_info_url)
video_info_data = video_info_response.json()
video_info_data
# Retrieve video comments
comments_url =
f"https://www.googleapis.com/youtube/v3/commentThreads?part=snippet&videoId={video_id}
&key={api_key}"
comments_response=
requests.get(comments_url) comments_data =
comments_response.json() comments_data
# Extract the carnents
comments = [item["snippet"]["topLevelComment"]["snippet"]["textOriginal"] for item in
comments_data["items"]]
print(comments)
from textblob import TextBlob
def get_comment_sentiment(comment):
 analysis = TextBlob(comment)
 if analysis.sentiment.polarity > 0:
   return "Positive"
 elif analysis.sentiment.polarity == 0:
   return
 "neutral"else:
   return
"negative"
comment_list = []
sentiment_list = []
for comment in comments:
 sentiment =
 get_comment_sentiment(comment)
comment_list.append(comment)
sentiment_list.append(sentiment)
print(f"{comment} : {sentiment}")
import pandas as pd
sentiment_df = pd.DataFrame({"Comments": comment_list,"Sentiment": sentiment_list})
sentiment_df.head() sentiment_df.to_csv("YouTube_Comments_Sentiment.csv")
```