```
In [ ]: import requests
    In [ ]: video id = "1-nMKJ5J3Uc"
                     api_key = "AIzaSyCJF6Ljcay6oDQ1Bv-o09ewD55Vktn_FEQ"
    In [ ]: 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()
                    print(video_info_data)
                   {'kind': 'youtube#videoListResponse', 'etag': 'cAeJdcwEec5A07417b_0iUeUcOY', 'items': [{'kind': 'youtube#video', 'etag': 'u4-XQ9ckrQCzaLXq9HWCeCLdJ'
                   Retrieve Youtube Video Comments
    In [ ]: comments_url = f"https://www.googleapis.com/youtube/v3/commentThreads?part=snippet&videoId={video_id}&key={api}
                     comments_response = requests.get(comments_url)
                     comments_data = comments_response.json()
                     comments data
'nextPageToken':
                    Z2V0X25Id2VzdF9maXJzdCOtQ2dnSWdBUVZGN2ZSTOJJRkNLZ2dHQUFTQ1FpSEl(
'pageInfo': {'totalResults': 20, 'resultsPerPage': 20},
'items': [{'kind': 'youtube#commentThread',
'etag': 'Nz6ClXeinrSUBHOySDQSOZr57Y',
'id': 'UgwD2Uup_GluBePhdYFAAABAg',
'snippet': {'channelId': 'UCX6OQ3DkcsbYNE6H8uQQuVA',
'videoId': '1-nMKJSJ3Uc',
'topLevelComment': {'kind': 'youtube#comment',
'etag': 'wwyKQk_nqx5pz_n3mhC01W4ISTE',
'id': 'UgwD2Uup_GluBePhdYF4AaABAg',
'snippet': {'channelId': 'UCX6OQ3DkcsbYNE6H8uQQuVA',
'videoId': '1-nMKJSJ3Uc',
'videoId': '1-nMKJSJ3Uc',
'textDisplay': 'LONGER VIDEOS WITH STORYTELLING IS HERE',
'textOriginal': 'LONGER VIDEOS WITH STORYTELLING IS HERE',
'authorDisplayName': '@MrBeast',
                               'authorDisplayName': '@MrBeast',
'authorProfileImageUrl': 'https://yt3.ggpht.com/fxGKYucJAVme-Yz4fsdCroCFCrANWqw0ql4GYuvx8Uq4l_euNJHgE-w9MTkLQA805vWCi-kE0g=s48-c-
                   k-c0x00fffffff-no-rj
                               Uffffff-no-rj',
'authorChannelUrl': 'http://www.youtube.com/@MrBeast',
'authorChannelId': {'value': 'UCX60Q3DkcsbYNE6H8uQQuVA'},
'canRate': True,
'viewerRating': 'none',
                               'canRate': Irue,
'viewerRating': 'none',
'likeCount': 199214,
'publishedAt': '2024-04-20T17:00:36Z',
'updatedAt': '2024-04-20T17:00:36Z'}},
                       'updatedAt': '2024-04-20T17:00:36Z'}},
'canReply': False,
'totalReplyCount': 750,
'isPublic': True}},

{'kind': 'youtube#commentThread',
'etag': 'nz3KQ_sx7thr0iZyD2FxyDnF_7Y',
'id': 'UgzhgBjsd71Y09JVfQdAaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'tool@colforment': ('kind': 'youtube#comment')
                           k-c0x00ffffff-no-rj
                                'authorChannelUrl': 'http://www.youtube.com/@yigglewiggle',
'authorChannelId': {'value': 'UCwoqltK7ezsL9LCioYtA0qA'},
                               'authorChannelUrl':
                      'authorChannelId': {'value': 'UCwoqltK7ezsL9LCioYi
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:15:43Z',
'updatedAt': '2024-04-27T16:15:43Z'},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
('kind': 'youtube#commentThread',
'etag': 'TSy9dYXNh15iRf5hqi473DEXSqQ',
'id': 'Ugws5pxLrhetPXmXLCh4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': '1-nMKJ5J3Uc',
'topLevelComment': {'kind': 'youtube#comment',
'etag': 'vzh4jnv9n-LSkZilP43wCyG7sAo',
'id': 'Ugws5pxLrhetPXmXLCh4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'id': 'Ugws5pxLrhetPXmXLCh4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA
                             'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA', 'videoId': 'l-nMKJ5J3Uc',
                               'textDisplay': 'Wish I was in a mr beast vid',
'textDriginal': 'Wish I was in a mr beast vid',
'authorDisplayName': '@MenzaTengoku',
'authorProfileImageUrl': 'https://yt3.ggpht.com/FvGjgRDOSNmMvRflgYBRbXexD34yIB_fykHi7ohrxJqVvDoDuXLoANsjzoOUw7ZX0k4L_60N=s48-c-k-
                   cOxOOfffffff-no-rj',
'authorChannelUrl': 'http://www.youtube.com/@MenzaTengoku',
'authorChannelId': {'value': 'UCZ8KZFv_W1IO1kwB_8NxUSQ'},
'canRate': True,
'canRate': True,
                               'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:15:04Z',
'updatedAt': '2024-04-27T16:15:04Z'}},
                           'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
```

```
{'kind': 'youtube#commentThread',
  'etag': 'JuSdcKtBfqkz3nwsmtxeDxj-4rA',
  'id': 'Ugz2BhS8ozcpwOmj7WB4AaABAg',
  'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
  'videoId': 'l-nMKJ5J3Uc',
  'topLevelComment': {'kind': 'youtube#comment',
   'etag': 'zkmL8oRgYK3iyCh-8dGjnXTg6Zw',
  'id': 'Ugz2BhS8ozcpwOmj7WB4AaABAg',
  'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
   'videoId': 'l-nMKJ5J3Uc',
  'textDisplay': 'Best video in a while'
                      'videoId': 'I-MMKJ5J3UC',
'textDisplay': 'Best video in a while',
'textOriginal': 'Best video in a while',
'authorDisplayName': '@stephanbuist5045',
'authorProfileImageUrl': 'https://yt3.ggpht.com/ytc/AIdro_nFtL15WInEAXPuSlnB-FVMJw7RHG1TfuUQNVR2KloH124=s48-c-k-c0x00ffffff-no-
                       'authorChannelUrl': 'http://www.youtube.com/@stephanbuist5045', 'authorChannelId': {'value': 'UCUdaikmk52ZvrrYdvEVqVcA'},
       'authorChannelId': {'value': 'UCUdaikmk52ZvrrYdvEV'
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:14:56Z',
'updatedAt': '2024-04-27T16:14:56Z'},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True},
{'kind': 'youtube#commentThread',
'etag': 'jxj4zgf1bXb9ULnCobaNYeNcVVw',
'id': 'UgypV9QIDHhJaUwzTn94AaABag',
'snippet': {'channelId': 'UCX6OQ3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'topLevelComment': {'kind': 'youtube#comment',
'etag': '6R9k_PQaWVn1dr9Q2m2AsriCB-I',
'id': 'UgypV9QIDHhJalwzTn94AaBABg',
authorChannelId': "('value': 'UCFrN59GYKXn3HPpkvTn55'
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:14:50Z',
'updatedAt': '2024-04-27T16:14:50Z'},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
('kind': 'youtube*commentThread',
'etag': 'GRLiQVNewyNfwDzzuTitJ3yVuaM',
'id': 'Ugzvge1_ywT95RXac7N4AaABABg',
'videoId': 'l-nMKJ5J3Uc',
'toplevelComment': {'kind': 'youtube*comment',
'etag': 'DsbEPSYYtiCECK5dFVDDbVI2Na4',
'id': 'Ugzvge1_ywT95RXac7N4AaABAg',
'snippet': {'channelId': 'UCX6OQ3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'videoId': 'l-nMKJ5J3Uc',
'textDisplay': '40s are evil mostly 43 and 42.',
'textDisplay': '40s are evil mostly 43 and 42.',
                       'viextDisplay': '40s are evil mostly 43 and 42.',
'textDriginal': '40s are evil mostly 43 and 42.',
'authorDisplayName': '@alexplays1237',
'authorProfileImageUrl': 'https://yt3.ggpht.com/ygXwwMTQ419YHaIO3qtvMbkVdxzYRkAJImDGa-EXOKOtiHAhECRzWvF6IdeMIpCTY5ZFpSWi3g=s48-c-
'authorProfileImageUr1': 'https://yt3.ggpht.com/ygXwwMTQ419Yl
k-c0x00ffffff-no-rj',
   'authorChannelUr1': 'http://www.youtube.com/@alexplays1237',
   'authorChannelId': {'value': 'UC72EaYE8uUwMVazu3dBcFgw'},
   'canRate': True,
   'viewerRating': 'none',
   'likeCount': 0,
   'publishedAt': '2024-04-27T16:14:44Z',
   'updatedAt': '2024-04-27T16:14:44Z'}},
      'id': 'UgxEZMJNWWof54YNlGh4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'topLevelComment': {'kind': 'youtube#comment',
'etag': 'iEZT3gkjfz-gwz8_EXt4oDAQt3c',
'id': 'UgxEZMJNWWof54YNlGh4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'textDisplay': 'I'm fighting who ever eliminates me',
'textDriginal': 'I'm fighting who ever eliminates me',
'authorDisplayName': '@bigboydarthmaul7257',
'authorProfileImageUrl': 'https://yt3.ggpht.com/t9MYU6BCJvV9zmD0hWTIL_2JdAQLYNLXkmSMxlRMmk5ghkij3C1bYswDT33ZGJv_wHkaSAoy=s48-c-k-
c00ffffff-no-rj',
                       'authorChannelUrl': 'http://www.youtube.com/@bigboydarthmaul7257',
'authorChannelId': {'value': 'UCbKFoVJCibBS9_6dpCuDbQA'},
                       'canRate': True,
'viewerRating': 'none',
```

```
'likeCount': 0,
'publishedAt': '2024-04-27T16:14:30Z',
'updatedAt': '2024-04-27T16:14:30Z'},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
{'kind': 'youtube#commentThread',
'etag': 'w0nrOPWZ6PVK6dtaSv0WILjENSM',
'id': 'UgwxLUSYg-Ez998LY3V4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'toplevelComment': {'kind': 'youtube#comment',
'etag': '15enp31T46tcb_S4-q2d1UPV0VM',
'id': 'UgwxLUSYg-Ez998LY3V4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'textDisplay': 'Mrbeast slowly turning his channel
                                                         'videoId': 'I-nMKJ5J3Uc',
'textDisplay': 'Mrbeast slowly turning his channel into squid <br/>'textDriginal': 'Mrbeast slowly turning his channel into squid \nGames',
'authorDisplayName': '@yigglewiggle',
'authorProfileImageUrl': 'https://yt3.ggpht.com/8n80BugkLE5zJAQ7kF_mp2628K4lBUv0D0Zpn_gk7VfAq8CSAiPT3HiF49vvGSo_es0wYwWbFA=s48-c-
     k-c0x00ffffff-no-rj',
    'authorChannelUrl': 'http://www.youtube.com/@yigglewiggle',
    'authorChannelId': {'value': 'UCwoqltK7ezsL9LCioYtA0qA'},
                                                         'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:14:28Z',
'updatedAt': '2024-04-27T16:14:28Z'}},
'publishedAt': '2024-04-27T16:14:28Z',
    'updatedAt': '2024-04-27T16:14:28Z'},
    'canReply: True,
    'totalReplyCount': 0,
    'isPublic': True}},
{'kind': 'youtube#commentThread',
    'etag': 'A0EK8ESvCZARZpvfeSXuDO48QMs',
    'id': 'UgywNkItjoYr29D2jW14AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': 'l-nMKJ5J3Uc',
    'topLevelComment': {'kind': 'youtube#comment',
    'etag': 'krp6pZ5oCQrtAk6Zy0XwshpUDBc',
    'id': 'UgywNkItjoYr29D2jW14AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': 'l-nMKJ5J3Uc',
    'textDisplay': 'Me cae mal 43 and 42',
    'textOriginal': 'Me cae mal 43 and 42',
    'authorDisplayName': '@user-jw5sy9vj1m',
    'authorProfileImageUrl': 'https://yt3.ggpht.com/ytc/AIdro_n5CE76MVQkMhu6a4iK8az9kQPv_kPr-iuQ5nXhdG29qrENWaHeBnsbgnZdiKIuS-Wfkw=s48-c-k-c0x00ffffff-no-rj',
    'authorChannelId': 'value': 'UCPfuF0eoyesWwgwR-s0M2Kg'},
    'canRate': True,
    'viowacPating': 'none'
                   'authorChannelUrl': 'http://www.youtube.com/@user-jw5sy9yj1m',
    'authorChannelId': {'value': 'UCPfuF0eoyesWwgwR-sOM2Kg'},
    'canRate': True,
    'viewerRating': 'none',
    'likeCount': 0,
    'publishedAt': '2024-04-27T16:14:11Z',
    'updatedAt': '2024-04-27T16:14:11Z'},
    'canReply': True,
    'totalReplyCount': 0,
    'isPublic': True},
    {'kind': 'youtube#commentThread',
    'etag': 'Mqq5B0yMfey8jbZihsbWcr9_Wss',
    'id': 'Ugx2qRWeaAmj_EicWl94AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQquVA',
    'videoId': '1-MMXJ5J3Uc',
    'topLevelComment': {'kind': 'youtube#comment',
    'etag': 'pqtsVaeOgkeAjhgrzlCfA2OILIE',
    'id': 'Ugx2qRWeaAmj_EicWl94AaABAg',
    'snippet': {'channelId': 'UCX60Q3bkcsbYNE6H8uQquVA',
    'videoId': '1-MMXJ5J3Uc',
    'totalveIsjalay': 'gutyloutube#comment',
    'etag': 'pqtsVaeOgkeAjhgrzlCfA2OILIE',
    'id': 'Ugx2qRWeaAmj_EicWl94AaABAg',
    'snippet': {'channelId': 'UCX60Q3bkcsbYNE6H8uQquVA',
    'videoId': '1-MMXJ5J3Uc',
    'textDisplay': 'gutylnow is not the time to develop a heart" '',
    'textOriginal': 'Now is not the time to develop a heart* '' '',
    'authorPorifileImageUrl': 'https://yww.youtube.com/@docdleage3',
    'authorPorifileImageUrl': 'https://yww.youtube.com/@docdleage3',
    'authorPorifileImageUrl': 'https://www.youtube.com/@docdleage3',
    'authorDisplayName': 'gutylname.com/@docdleage3',
    'authorDisplayName': 'gutylname.com/@docdleage3',
    'authorDisplayName': 'gutylname.com/@docdleage3',
    'authorDisplayName': 'gutylname.com/@docdleage3',

'authorDisplayName': '@doodleee3',
    'authorProfileImageUrl': 'https://yt3.ggpht.com/~vM90cSV-m
k-c0x00ffffff-no-rj',
    'authorChannelUrl': 'http://www.youtube.com/@doodleee3',
    'authorChannelId': {'value': 'UCoWwR5j6BL88aFRlC26dWbg'},
    'canRate': True,
    'viewerRating': 'none',
    'likeCount': 1,
    'publishedAt': '2024-04-27T16:13:49Z',
    'updatedAt': '2024-04-27T16:13:49Z'},
    'canReply': True,
    'totalReplyCount': 0,
    'isPublic': True}},
    {'kind': 'youtube#commentThread',
    'etag': 'U_X3zT2cq1_47Dv1RqKXZ3VMSg',
    'id': 'UgyeRHLktYc1z-itIVp4AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': '1-nMKJ5J3Uc',
    'topLevelComment': {'kind': 'youtube#comment',
    'etag': 'CCU3nS219NlAIU_9wtrhmpgzXpE',
    'id': 'UgyeRHLktYc1z-itIVp4AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': '1-mKJ5J3Uc',
    'textDisplay': 'WUXAGABAG',
    'videoId': '1-mKJ5J3Uc',
    'textOriginal': '@user-ud2nl3yo6i',
    'authorProfileImageUrl':
    'https://vt3.gepth.com/vtc/Aldro.lakiAOG6APgun5ka2vr77FM6nHi6zee
                                                           'authorProfileImageUrl'
      'canRate': True,
'viewerRating': 'none',
                   'viewerRating': 'none',
  'likeCount': 0,
  'publishedAt': '2024-04-27T16:13:32Z',
  'updatedAt': '2024-04-27T16:13:32Z'}},
'canReply': True,
'totalReplyCount': 0,
  'isPublic': True}},
{'kind': 'youtube#commentThread',
  'etag': 'MvRQtKThORPKmptzNcoFMpq69IM',
  'id': 'UgyavEhFhCY1tjMIzH54AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
  'videoId': 'l-nMKJ5J3UC',
  'topLevelComment': {'kind': 'youtube#comment',
    'etag': '40RnAdq-wfuSI7UDKZ2KMo1UQ2A',
    'id': 'UgyavEhFhCY1tjMIzH54AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': 'l-nMKJ5J3Uc',
    'videoId': 'l-nMKJ5J3Uc',
    'textDisplay': '96years old is amazing \(\mathbf{L}',
    'videoId': '96years old is amazing \(\mathbf{L}',

                                                           Videolo': 'I-MMKJ5J3UC',
'textDisplay': '96years old is amazing ♀',
'textOriginal': '96years old is amazing ♀',
'authorDisplayName': '@user-jy2ry8lc9s',
'authorProfileImageUrl': 'https://yt3.ggpht.com/1JTiThU4kXFNZBxhq-ZBrb-VJPg2yiNdGyescV13ziePJIpBxkukaODfLxJYDxieKZafvWFo=s48-c-k-
```

```
c0x00fffffff-no-ri
                             'authorChannelUrl': 'http://www.youtube.com/@user-jy2ry8lc9s',
'authorChannelId': {'value': 'UCUuqM6cPg4bXWx0U63geQQw'},
                            'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:13:24Z',
'updatedAt': '2024-04-27T16:13:24Z'}},
authorChannelId': "Ittp://www.youtube.com/eylgglev
'authorChannelId': {'value': "UCwoqltK7ezsL9LCioYtAC
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:12:29Z',
'updatedAt': '2024-04-27T16:12:29Z'}},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
('kind': 'youtube*commentThread',
'etag': '6TuYrfICks6M400Ebdsp00-WHAA',
'id': 'UgzQN10bJFaZYlbnnpR4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3UC',
'etag': 'gEr-6A62psUXT5iy29Qf56POA',
'id': 'UgzQN10bJFaZYlbnnpR4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': '|-nMKJ5J3UC',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': '|-nMKJ5J3UC',
'textDisplay': 'i cried because of the 40s',
                            'textDisplay': 'i cried because of the 40s',
'textOriginal': 'i cried because of the 40s',
'authorDisplayName': '@thebiggestswiftieever-yu9jp',
'authorProfileImageUrl':
 'id': 'UgzoQmwT239Xyp6iXCN4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'topLevelComment': {'kind': 'youtube#comment',
'etag': 'MGJaoocuXtcEzRuCS6qDLQz45rw',
                     'topLevelComment': {'kind': 'youtube#comment',
    'etag': 'MGJaoocuXtCEZRUCS6qDLQ245rw',
    'id': 'UgzoQmwT239Xyp6iXCN4AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': '1-nMKJ5J3Uc',
    'textDisplay': 'I didn't even notice that this video was 40 mins long :D Felt way shorter',
    'textDisplay': "I didn't even notice that this video was 40 mins long :D Felt way shorter',
    'authorDisplayName': '@MSYolost',
    'authorProfileImageUrl': 'https://yt3.ggpht.com/ytc/AIdro_n92-q9pcQUtF6xngrbcwDjHuLJfNYFurNg9NgvJHk=s48-c-k-c0x00ffffff-no-rj',
    'authorChannelUrl': 'http://www.youtube.com/@MSYolost',
    'authorChannelId': {'value': 'UCNTgLpWeSGFARu4PNFSJkAQ'},
    'canRate': True,
    'viewerRating': 'none',
    'likeCount': 0,
    'publishedAt': '2024-04-27T16:12:13Z',
    'updatedAt': '2024-04-27T16:12:13Z'},
    'canReply': True,
       'publishedAt': '2024-04-27T16:12:13Z'},
    'updatedAt': '2024-04-27T16:12:13Z'},
    'canReply': True,
    'totalReplyCount': 0,
    'isPublic': True},
    {'kind': 'youtube#commentThread',
    'etag': 'f35ldnbiEC7AkoK15BbICjvVr_Y',
    'id': 'UgydFuPlmzUwQ74Nnax4AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': 'l-nMKJ5J3Uc',
    'topLevelComment': {'kind': 'youtube#comment',
    'etag': 'GiwGVQLf6wzXYiCoOi3cUgYc90V',
    'id': 'UgydFuPlmzUwQ74Nnax4AaABAg',
    'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
    'videoId': 'l-nMKJ5J3Uc',
    'toteOid': 'l-nMKJ5J3Uc',
    'textDisplay': 'Esse foi o video que eu mais odiei',
    'vtextDisplay': 'Esse foi o video que eu mais odiei',
    'authorPisplayName': '@richardrafaello9914',
    'authorPofileImageUrl': 'https://yt3.ggpht.com/fpbchPV5PjjtfZiWG-T5CrW4g62up0k8K-aZqrCwvooFXoo30QMxP2H-ifsF70qMyveWjQUJ2g=s48-c-c0x00fffff-no-rj',
    'authorChannelIrl': 'http://www.youtube.com/@richardrafaello9914',
   k-c0x00ffffff-no-rj
                            'authorChannelUrl': 'http://www.youtube.com/@richardrafaello9914',
'authorChannelId': {'value': 'UCOkU2YXN4GERPWJy8S1ycmg'},
                   'authorChannelId': {'Value': 'UCUKU2YX
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:12:06Z',
'updatedAt': '2024-04-27T16:12:06Z'}},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
          'isPublic': True}},

{'kind': 'youtube#commentThread',
'etag': '9kgxxxAo5kWZQE8RQ4UxBSliwP4',
'id': 'UgygSaUGMivX7_HnzAx4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3UC',
'topLevelComment': {'kind': 'youtube#comment',
'etag': 'wCq0ez1nunTNPL0b0-fL58p1J0I',
'id': 'UgygSaUGMivX7_HnzAx4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
```

```
'textDisplay': 'dis is psychological torture',
'textOriginal': 'dis is psychological torture',
'authorDisplayName': '@Dipslox',
'authorProfileImageUrl': 'https://yt3.ggpht.com/ytc/AIdro_n-n8jD85FkaEZD5mm2AXjc83508pBkpEwO9SQrkNEODqQ=s48-c-k-c0x00ffffff-no-
                               'authorChannelUrl': 'http://www.youtube.com/@Dipslox', 'authorChannelId': {'value': 'UCZONmKelR5cnhijiGJhX14g'},
                                'authorChammess'
'canRate': True,
-Pating': 'none',
                               'canRate': Irue,
'viewerRating': 'none',
'likeCount': 0,
''ishedAt': '2024-04-27T16:11:27Z'
                                'publishedAt': '2024-04-27T16:11:27Z',
'updatedAt': '2024-04-27T16:11:27Z'}},
                      'updatedAt': '2024-04-27T16:11:27Z'}},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},

{'kind': 'youtube#commentThread',
'etag': 'BDQQE5Jvw_n8lR14s4jSaTMBil8',
'id': 'UgywR81tMEPOnLBMGWt4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'tooleuplComment': ('kind': 'youtube#comment')
                           'videoid': '-חארים': 'youtube#comment',
'etag': 'juG_iK5wOOQZwE8RwOtPERzscgI',
                             topLevelComment:: {'King': 'youtube*Comment,
'etag': 'juG_iKSw00QZwE8Rw0dYPERzscgI',
'id': 'UgywR81tMEPOnLBMGWt4AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'textDisplay': 'Hey what I want you to do is go to time stamp <br/>'textDisplay': 'Hey what I want you to do is go to time stamp \nChallenge audio truck to',
'textOriginal': 'Hey what I want you to do is go to time stamp \nChallenge audio truck to',
'authorDisplayName': '@yigglewiggle',
'authorProfileImageUrl': 'https://yt3.ggpht.com/8n80BugkLE5zJAQ7kF_mp2628K4lBUv0D0Zpn_gk7VfAq8CSAiPT3HiF49vvGSo_es0wYwWbFA=s48-c-
**COOFFFFFFF-Do-ri'
                 'authorChannelId': {'value': 'UCwoqltK
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:11:20Z',
'updatedAt': '2024-04-27T16:11:20Z'}},
'canReply': True,
'totalReplyCount': 0,
'isPublic': True}},
                       {'kind': 'youtube#commentThread', 
 'etag': 'fvqba7S-FV5ztZRBKXWW37HF1wc',
                         'tetag': 'fvqba75-FV5ztZRBKXWM37HF1wc',
'id': 'UgwLm4Lgc0VEUC13f854AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
'topLevelComment': {'kind': 'youtube#comment',
                              topLevelComment : { kInd : youtube#comment ,
'etag': 'CQesnYOqRunW6Czm005srjCoGhw',
'id': 'UgwLm4LgcOVEUC13f854AaABAg',
'snippet': {'channelId': 'UCX60Q3DkcsbYNE6H8uQQuVA',
'videoId': 'l-nMKJ5J3Uc',
                                ''textDisplay': 'good job no that I was sad in the end',
'textDriginal': 'good job no that I was sad in the end',
'authorDisplayName': '@Cookie-lv1kj',
'authorProfileImageUrl': 'https://yt3.ggpht.com/6ZVbpYFu9HQo9cVe1zpHRYikOs6SPEExcRdW7whSUwgjc8WhGTUKTuVzVHRyjGQe-kpJo_DlVA=s48-c-
                  k-c0x00ffffff-no-rj
                               Diffffff-no-rj',
'authorChannelUrl': 'http://www.youtube.com/@Cookie-lv1kj',
'authorChannelId': {'value': 'UCTSPQ9B849sFa7mU8kxjqNQ'},
'canRate': True,
'viewerRating': 'none',
'likeCount': 0,
'publishedAt': '2024-04-27T16:11:09Z',
'updatedAt': '2024-04-27T16:11:09Z'}},
                          'canReply': True,
'totalReplyCount': 0,
'isPublic': True}}]
In [ ]: | #extract the comment
                    comments = [item["snippet"]["topLevelComment"]["snippet"]["textOriginal"] for item in comments_data["items"]]
                   print(comments)
                  ['LONGER VIDEOS WITH STORYTELLING IS HERE', '7 said I will buy you Roblox I promise if you get out of your cube', 'Wish I was in a mr beast vid',
                 Sentiments Analysis Of the Comments
In [ ]: from textblob import TextBlob
In [ ]: def get_comment_sentiment(comment):
                               analysis = TextBlob(comment)
```

```
def get_comment_sentiment(comment):
    analysis = TextBlob(comment)

if analysis.sentiment.polarity > 0:
    return 'positive'
    elif analysis.sentiment.polarity == 0:
        return 'neutral'
    else:
        return 'nagative'

for comment in comments:
    print(f"{comment}: {get_comment_sentiment(comment)}")

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}")
                                    LONGER VIDEOS WITH STORYTELLING IS HERE: neutral
                                    7 said I will buy you Roblox I promise if you get out of your cube: neutral Wish I was in a mr beast vid: neutral
                                    Wish I was in a mr beast vio: neutral
Best video in a while: positive
42 was a literal puppeteer, just absolutely controlling 43. And 43 was just a puppet who somewhat couldn't think for herself. Glad 58 ended the cyc.
40s are evil mostly 43 and 42.: nagative
Longer vids are always better brother.: positive
I'm fighting who ever eliminates me: neutral
Michael Cally thereing his channel into cauld
                                     Mrbeast slowly turning his channel into squid
                                    Games: nagative
Me cae mal 43 and 42: neutral
                                    "Now is not the time to develop a heart": neutral
96years old is amazing : positive
42 is such a cartoon Villain (2000): neutral
                                   42 is such a cartoon Villain *** : neutral i cried because of the 40s: neutral I didn't even notice that this video was 40 mins long :D Felt way shorter: positive Esse foi o video que eu mais odiei: neutral dis is psychological torture: neutral Hey what I want you to do is go to time stamp Challenge audio truck to: neutral good job no that I was sad in the end: positive LONGER VIDEOS WITH STORYTELLING IS HERE: neutral 7 said. I will have you Poblox I promise if you get out of your cube : neutral
                                   LONGER VIDEOS WITH STORYTELLING IS HERE : neutral
7 said I will buy you Roblox I promise if you get out of your cube : neutral
Wish I was in a mr beast vid : neutral
Best video in a while : positive
42 was a literal puppeteer, just absolutely controlling 43. And 43 was just a puppet who somewhat couldn't think for herself. Glad 58 ended the cycle
40s are evil mostly 43 and 42. : nagative
Longer vids are always better brother. : positive
I'm fighting who ever eliminates me : neutral
Mrbeast slowly turning his channel into squid
Games : nagative
Me cae mal 43 and 42 : neutral
"Now is not the time to develop a heart" : neutral
                                     "Now is not the time to develop a heart" : neutral
                                    Solution:

Solution

Solu
                                    Hey what I want you to do is go to time stamp
Challenge audio truck to : neutral
good job no that I was sad in the end : positive
        In [ ]: import pandas as pd
                                       comment_list
                                        sentiment_list
                                        sentiment_df = pd.DataFrame({"Comments": comment_list,"Sentiment": sentiment_list})
                                        sentiment_df
                                        sentiment_df.to_csv("YouTube_Comments_Sentiment.csv") #gets saved to current folder
        In [ ]: | sentiment_df
Out [191:
                                                                                                                                                                                 Comments Sentiment
```

0	LONGER VIDEOS WITH STORYTELLING IS HERE	neutral
1	7 said I will buy you Roblox I promise if you	neutral
2	Wish I was in a mr beast vid	neutral
3	Best video in a while	positive
4	42 was a literal puppeteer, just absolutely co	positive
5	40s are evil mostly 43 and 42.	nagative
6	Longer vids are always better brother.	positive
7	I'm fighting who ever eliminates me	neutral
8	Mrbeast slowly turning his channel into squid \dots	nagative
9	Me cae mal 43 and 42	neutral
10	"Now is not the time to develop a heart"🥶	neutral
11	ママママ 選選選	neutral
12	96years old is amazing 😮	positive
13	42 is such a cartoon Villain 😂 😂 😂	neutral
14	i cried because of the 40s	neutral
15	I didn't even notice that this video was 40 mi	positive
16	Esse foi o vídeo que eu mais odiei	neutral
17	dis is psychological torture	neutral
18	Hey what I want you to do is go to time stamp \dots	neutral
19	good job no that I was sad in the end	positive