Project Description:

This project involves analyzing data related to G20 Summits, including information about the summits, member countries, international organizations, and summit events. The project aims to derive various insights and answer specific questions related to the G20 Summits using SQL queries.

2023

Presented by: Nitish Kumar

Tables Used:

1. G20_Summits: Contains information about G20 Summit details, including start and end dates, host country, venue, and host leader.
2. MemberCountries: Provides information about member countries, including country names and leader titles.
3. G20_InternationalOrgRelations: Contains information about the relationship between G20 Summits and international organizations.
4. InternationalOrganizations: Includes details about international organizations participating in G20 Summits.
5. G20_SummitSchedule: Contains information about scheduled events for G20 Summits.

Presented by: Nitish Kumar

1. Find the G20 Summit with the longest duration?

```sql
SELECT *
        ,DATEDIFF(EndDate,StartDate) AS Longest_duration
FROM G20_Summits
ORDER BY Longest_duration DESC
LIMIT 1;
```

2023

Presented by: Nitish Kumar

OUTPUT

SummitID	StartDate	EndDate	HostCountry	Venue	HostLeader	Longest_duration
1	2008-11-14	2008-11-15	United States	National Building Museum, Washington, D.C	George W. Bush	1

20
23

Presented by: Nitish Kumar

2. Find the G20 Summit hosted by the leader with the longest name?

```sql
SELECT gs.SummitID
      ,gs.HostCountry
      ,gs.HostLeader
      ,MAX(LENGTH(mc.LeaderName)) AS MaxLeaderNameLength
FROM G20_Summits AS gs
JOIN  MemberCountries AS mc ON gs.HostCountry = mc.CountryName
GROUP BY gs.SummitID
ORDER BY MaxLeaderNameLength DESC
LIMIT 1;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #2 Execution time: 1ms

SummitID	HostCountry	HostLeader	MaxLeaderNameLength
7	Mexico	Felipe Calderón	29

20
23

Presented by: Nitish Kumar

3. Find the total number of International Organizations participating in the 18th G20 Summit?

```sql
SELECT COUNT(DISTINCT(oi.OrgID)) AS TotalInternationalOrgs
FROM G20_InternationalOrgRelations AS gir
JOIN InternationalOrganizations oi ON gir.OrgID = oi.OrgID
WHERE gir.SummitID = 18;
```

20
23

Presented by: Nitish Kumar

OUTPUT

Query #3 **Execution time: 0ms**

TotalInternationalOrgs

9

2023

Presented by: Nitish Kumar

4. Find the International Organizations that did not participate in the 18th G20 Summit?

```sql
SELECT io.OrgID
       ,io.OrgName
FROM   InternationalOrganizations AS io
WHERE io.OrgID NOT IN
(
  SELECT gi.OrgID
  FROM G20_InternationalOrgRelations AS gi
);
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #4 Execution time: 1ms

OrgID	OrgName
10	World Trade Organization

20
23

Presented by: Nitish Kumar

5. Find the number of events scheduled for the 18th G20 Summit.

```sql
SELECT COUNT(DISTINCT(EventID)) AS Number_of_events
FROM G20_SummitSchedule
WHERE SummitID = 18;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #5 Execution time: 0ms

Number_of_events

79

2023

6. Find the date of the first event and the date of the last event for the 18th G20 Summit?

```sql
SELECT MIN(EventDate) AS FirstEventDate
      ,MAX(EventDate) AS LastEventDate
FROM G20_SummitSchedule
WHERE SummitID = 18;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #6   Execution time: 0ms

FirstEventDate	LastEventDate
2022-12-13	2023-09-09

20
23

• • • • •

Presented by: Nitish Kumar

7. Find the G20 Summit events that are scheduled in a virtual mode?

```sql
SELECT EventID
       ,EventName
       ,EventDate
       ,EventLocation
FROM G20_SummitSchedule
WHERE EventLocation LIKE "Virtual%" AND SummitID = 18;
```

2023

Presented by: Nitish Kumar

OUTPUT

EventID	EventName	EventDate	EventLocation
5	1st Joint Finance and Health Task Force Meeting	2023-01-09	Virtual mode
24	2nd Joint Finance-Health Task Force Meeting	2023-03-21	Virtual mode
50	3rd Joint Health-Finance Task Force Meeting	2023-06-26	Virtual

Query #7   Execution time: 0ms

2023

Presented by: Nitish Kumar

8. Find the G20 Summit events that took place in Pune and Mumbai?

```sql
SELECT EventID
       ,EventName
       ,EventDate
       ,EventLocation
FROM G20_SummitSchedule
WHERE EventLocation ="Pune" OR EventLocation ="Mumbai";
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #8 Execution time: 14ms

EventID	EventName	EventDate	EventLocation
3	1st Development Working Group Meeting	2022-12-16	Mumbai
7	1st Infrastructure Working Group Meeting	2023-01-18	Pune
28	1st Trade & Investment Working Group Meeting	2023-03-29	Mumbai
39	3rd Digital Economy Working Group Meeting	2023-06-12	Pune
46	4th Education Working Group Meeting	2023-06-21	Pune
48	Education Ministers Meeting	2023-06-22	Pune

20
23

Presented by: Nitish Kumar

9.Rank G20 Summit events by their start dates using the DENSE_RANK function?

```sql
SELECT SummitID
       ,StartDate
       ,DENSE_RANK() OVER ( ORDER BY StartDate) AS DenseRank
FROM G20_Summits ;
```

2023

Presented by: Nitish Kumar

OUTPUT

SummitID	StartDate	DenseRank
1	2008-11-14	1
2	2009-04-02	2
3	2009-09-24	3
4	2010-06-26	4
5	2010-11-11	5
6	2011-11-03	6
7	2012-06-18	7
8	2013-09-05	8
9	2014-11-15	9
10	2015-11-15	10
11	2016-09-04	11

Presented by: Nitish Kumar

2023

10. Rank G20 Summit events based on their event dates?

```sql
SELECT EventID
      ,EventName
      ,EventDate
      ,RANK() OVER(PARTITION BY SummitID ORDER BY EventDate ) AS EventRank
FROM G20_SummitSchedule ;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #10 Execution time: 1ms

EventID	EventName	EventDate	EventRank
2	1st Finance & Central Bank Deputies Meeting	2022-12-13	1
1	1st Sherpa meeting	2022-12-13	1
3	1st Development Working Group Meeting	2022-12-16	3
4	1st Framework Working Group Meeting	2022-12-20	4
5	1st Joint Finance and Health Task Force Meeting	2023-01-09	5
6	1st Meeting for the Global Partnership for Financial Inclusion	2023-01-16	6
7	1st Infrastructure Working Group Meeting	2023-01-18	7
8	1st Health Working Group Meeting	2023-01-30	8
10	1st Education Working Group Meeting	2023-01-31	9
9	1st International Financial Architecture Working Group Meeting	2023-02-02	10
11	1st Employment Working Group Meeting	2023-02-02	10

20
23

Presented by: Nitish Kumar

11. Concatenate the HostCountry, Venue, and HostLeader columns in the G20_Summits table to create a summary of each summit?

```sql
SELECT SummitID
     ,CONCAT(HostCountry," ","hosted at"," ",Venue," ","led by"," ",HostLeader) AS SummitSummary
FROM  G20_Summits;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #10 Execution time: 1ms

EventID	EventName	EventDate	EventRank
2	1st Finance & Central Bank Deputies Meeting	2022-12-13	1
1	1st Sherpa meeting	2022-12-13	1
3	1st Development Working Group Meeting	2022-12-16	3
4	1st Framework Working Group Meeting	2022-12-20	4
5	1st Joint Finance and Health Task Force Meeting	2023-01-09	5
6	1st Meeting for the Global Partnership for Financial Inclusion	2023-01-16	6
7	1st Infrastructure Working Group Meeting	2023-01-18	7
8	1st Health Working Group Meeting	2023-01-30	8
10	1st Education Working Group Meeting	2023-01-31	9
9	1st International Financial Architecture Working Group Meeting	2023-02-02	10
11	1st Employment Working Group Meeting	2023-02-02	10

Presented by: Nitish Kumar

2023

12. Calculate the duration (in days) of each G20 Summit?

```sql
SELECT SummitID
      ,StartDate
      ,EndDate
      ,DATEDIFF(EndDate,StartDate) AS DurationInDays
FROM G20_Summits;
```

2023

Presented by: Nitish Kumar

OUTPUT

Query #12 | Execution time: 1ms

SummitID	StartDate	EndDate	DurationInDays
1	2008-11-14	2008-11-15	1
2	2009-04-02	2009-04-02	0
3	2009-09-24	2009-09-25	1
4	2010-06-26	2010-06-27	1
5	2010-11-11	2010-11-12	1
6	2011-11-03	2011-11-04	1
7	2012-06-18	2012-06-19	1
8	2013-09-05	2013-09-06	1
9	2014-11-15	2014-11-16	1
10	2015-11-15	2015-11-16	1
11	2016-09-04	2016-09-05	1
12	2017-07-07	2017-07-08	1

2023

13. Find G20 Summits with the case when the HostCountry is 'India,' mark them as 'Upcoming,' and all others as 'Historical'?

```sql
SELECT SummitID
        ,StartDate
        ,HostCountry
        ,CASE
            WHEN HostCountry = "India" THEN "Upcoming"
            ELSE "Historical"
            END AS SummitStatus
FROM G20_Summits;
```

2023

Presented by: Nitish Kumar

OUTPUT

SummitID	StartDate	HostCountry	SummitStatus
		Query #13 Execution time: 0ms	
1	2008-11-14	United States	Historical
2	2009-04-02	United Kingdom	Historical
3	2009-09-24	United States	Historical
4	2010-06-26	Canada	Historical
5	2010-11-11	South Korea	Historical
6	2011-11-03	France	Historical
7	2012-06-18	Mexico	Historical
8	2013-09-05	Russia	Historical
9	2014-11-15	Australia	Historical
10	2015-11-15	Turkey	Historical
11	2016-09-04	China	Historical

Presented by: Nitish Kumar

14. Convert the LeaderTitle names of MemberCountries to lowercase and convert the CountryName names to uppercase ?

```sql
SELECT CountryID
        ,UPPER(CountryName) AS UppercaseCountryName
        ,LOWER(LeaderTitle) AS LowercaseLeaderTitle
FROM MemberCountries;
```

2023

Presented by: Nitish Kumar

OUTPUT

CountryID	UppercaseCountryName	LowercaseLeaderTitle
1	INDIA	prime minister
2	ARGENTINA	president
3	AUSTRALIA	prime minister
4	BRAZIL	president
5	CANADA	prime minister
6	CHINA	president
7	FRANCE	president
8	GERMANY	chancellor
9	INDONESIA	president
10	ITALY	prime minister
11	JAPAN	prime minister

Query #14   Execution time: 0ms

Presented by: Nitish Kumar

20
23

15. Find the previous and next G20 Summit event for each event based on their EventDate ?

```sql
SELECT EventID
      ,EventName
      ,EventDate
      ,LAG(EventName) OVER(ORDER BY EventDate)  AS PreviousEvent
      ,LEAD(EventName) OVER(ORDER BY EventDate) AS NextEvent
FROM G20_SummitSchedule;
```
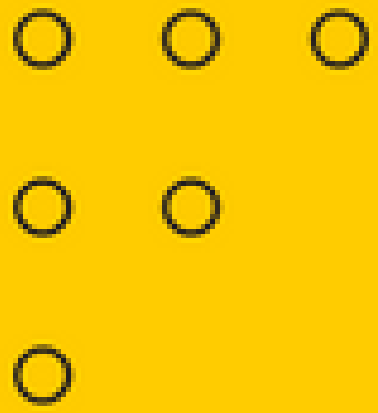
2023

Presented by: Nitish Kumar

OUTPUT

EventID	EventName	EventDate	PreviousEvent	NextEvent
2	1st Finance & Central Bank Deputies Meeting	2022-12-13	null	1st Sherpa meeting
1	1st Sherpa meeting	2022-12-13	1st Finance & Central Bank Deputies Meeting	1st Development Working Group Meeting
3	1st Development Working Group Meeting	2022-12-16	1st Sherpa meeting	1st Framework Working Group Meeting
4	1st Framework Working Group Meeting	2022-12-20	1st Development Working Group Meeting	1st Joint Finance and Health Task Force Meeting
5	1st Joint Finance and Health Task Force Meeting	2023-01-09	1st Framework Working Group Meeting	1st Meeting for the Global Partnership for Financial Inclusion
6	1st Meeting for the Global Partnership for Financial Inclusion	2023-01-16	1st Joint Finance and Health Task Force Meeting	1st Infrastructure Working Group Meeting
7	1st Infrastructure Working Group Meeting	2023-01-18	1st Meeting for the Global Partnership for Financial Inclusion	1st Health Working Group Meeting
8	1st Health Working Group Meeting	2023-01-30	1st Infrastructure Working Group Meeting	1st Education Working Group Meeting
10	1st Education Working Group Meeting	2023-01-31	1st Health Working Group Meeting	1st International Financial Architecture Working Group Meeting
9	1st International Financial Architecture Working Group Meeting	2023-02-02	1st Education Working Group Meeting	1st Employment Working Group Meeting
11	1st Employment Working Group Meeting	2023-02-02	1st International Financial Architecture Working Group Meeting	1st Sustainable Finance Working Group Meeting
12	1st Sustainable Finance Working Group Meeting	2023-02-05	1st Employment Working Group Meeting	1st Energy Transitions Working Group Meeting

2023

Presented by: Nitish Kumar