Data Source:

• https://gol.gg/esports/home/

Games of Legends is a widely known third-party professional LoL database. It serves as our data source of information in relation to matches and rounds.

 https://docs.google.com/spreadsheets/d/1Y7k5kQ2AegbuyiGwEPsa62e883FYVt Hqr6UVut9RC4o/pubhtml#

Information in relation to clubs, teams, and players are acquired from this site.

https://lol.fandom.com/wiki/Wiki

Information in relation to contracts signed between clubs and players are acquired from this site.

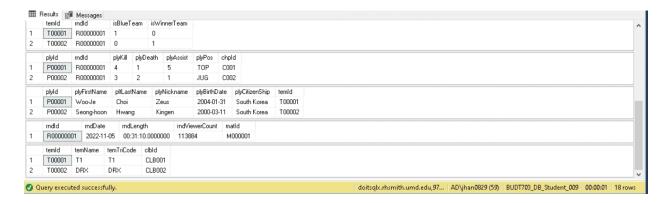
https://docs.google.com/spreadsheets/d/1kF3O7Dma61w_N5T4OdhqHs4HkTU8
 nT9ztTVWfAc4HRA/edit?usp=share_link

Data acquired from the sources were processed and compiled into this google sheet.

Test:

DDL:





• Data input:

ORDER BY r.rndViewerCount

We used SQL Server Import and Export Wizard to import data.

• DML:

1. What are the top 3 rounds which have the most viewers?

```
SELECT r.*

FROM [LOL.Round] r,

(

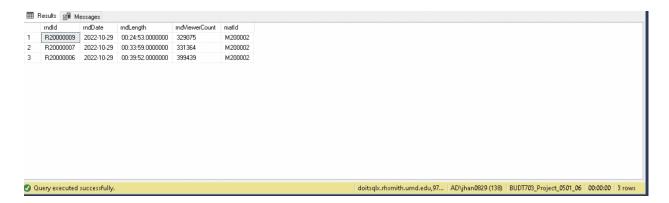
SELECT TOP 3 r1.rndViewerCount

FROM [LOL.Round] r1

GROUP BY r1.rndViewerCount

ORDER BY r1.rndViewerCount DESC
) viewerCount

WHERE r.rndViewerCount IN (viewerCount.rndViewerCount)
```



2. What are the top 3 champions with the highest win rate?

SELECT TOP 3 c.chpld AS [Champion Id],

c.chpName AS [Champion Name],

1 - SUM(CAST(pa.isWinnerTeam AS DECIMAL(14,4))) /

COUNT(c.chpld) AS [Win Rate]

FROM [LOL.Champion] c JOIN [LOL.Perform] pe ON c.chpld = pe.chpld

JOIN [LOL.Player] p ON p.plyId = pe.plyId

JOIN [LOL.Participate] pa ON pa.rndld = pe.rndld AND pa.temld = p.temld

GROUP BY c.chpld, c.chpName

ORDER BY [Win Rate] DESC, c.chpld



3. Who are the players with the best performance (defined as (player kill + player assist) / player death) in a single round?

DROP VIEW IF EXISTS KDA

CREATE VIEW KDA AS

```
SELECT p.rndld, p.plyld, p.plyPos,
       CASE
       WHEN p.plyDeath = 0 THEN p.plyAssist + p.plyKill
       ELSE CAST((p.plyAssist + p.plyKill) AS DECIMAL(10,2)) / CAST(p.plyDeath AS
DECIMAL(10,2))
       END AS kda
FROM [LOL.Perform] p
SELECT
            k.rndld,
            CONCAT(pl.plyFirstName, '', pl.plyLastName) AS 'PlayerName',
            pl.plyNickname,
            CONVERT(DECIMAL(10, 2), ROUND(k.kda, 2)) AS 'KDA'
FROM KDA k JOIN [LOL.Player] pl ON k.plyld = pl.plyld
WHERE k.kda = (
      SELECT MAX(k1.kda) AS 'MaxKDA'
      FROM KDA k1
      WHERE k1.rndld = k.rndld
      )
```

ORDER BY k.rndld



4. Who are the players with the best average performance on each position (i.e. top, mid, jungle, adc, support)?

```
SELECT CONCAT(pl.plyFirstName, '', pl.plyLastName) AS [PlayerName], pl.plyNickname, k.plyPos, CONVERT(DECIMAL(10, 2),ROUND(k.kda, 2)) AS 'KDA' FROM KDA k JOIN [LOL.Player] pl ON k.plyId = pl.plyId, (

SELECT K.plyPos, MAX(k.kda) AS 'MaxKDA' FROM KDA k JOIN [LOL.Player] p ON k.plyId = p.plyId GROUP BY k.plyPos
) maxKDA

WHERE k.plyPos = maxKDA.plyPos AND k.kda = maxKDA.MaxKDA
ORDER BY k.plyPos, [PlayerName]
```

	PlayerName	plyNickname	plyPos	KDA
	Huanfeng Tang	huanfeng	ADC	15.00
	Wang-ho Han	Peanut	JUG	15.00
3	Tao Xiang	Angel	MID	19.00
4	Min-seok Ryu	Keria	SUP	14.00
5	Si-woo Son	Lehends	SUP	14.00
6	Tanpanao Li	XinLiu	SUP	14.00
7	Seunglok Kang	TheShy	TOP	17.00

5. What is the average performance of players from different regions?

```
SELECT c.clbRegion,

CONVERT(DECIMAL(10, 2), ROUND(AVG(k.kda),2)) AS [Regional Avg. Perf.]

FROM [LOL.Player] pl

JOIN KDA k ON pl.plyld=k.plyld

JOIN [LOL.Perform] pe ON pl.plyld = pe.plyld
```

JOIN [LOL.Team] t ON pl.temId = t.temId

JOIN [LOL.Club] c ON t.clbId = c.clbId

GROUP BY c.clbRegion



6. Who are the players who served a club for the longest time?

SELECT pl.plyId, CONCAT(pl.plyFirstName, ' ', pl.plyLastName) AS 'Player Name', cl.clbld AS 'Club ID',

cl.clbName AS 'Club Name', cn.conStartDate AS 'Contrat Start',

CAST(DATEDIFF(DAY, cn.conStartDate, GETDATE()) AS VARCHAR(10)) AS 'Serve Days'

FROM [LOL.Player] pl, [LOL.Contract] cn, [LOL.Club] cl

WHERE cl.clbld = cn.clbld

AND pl.plyld = cn.plyld

AND CAST(DATEDIFF(DAY, cn.conStartDate, GETDATE()) AS VARCHAR(10)) IN (

SELECT MAX(CAST(DATEDIFF(DAY, cn_s.conStartDate, GETDATE()) AS VARCHAR(10))) AS 'Max Work Day'

FROM [LOL.Player] pl_s, [LOL.Contract] cn_s, [LOL.Club] cl_s

WHERE cl_s.clbId = cn_s.clbId

AND pl_s.plyId = cn_s.plyId

GROUP BY cl_s.clbld)

GROUP BY pl.plyId, pl.plyFirstName, pl.plyLastName, cl.clbId, cl.clbName, cn.conStartDate;

