SHARK TANK INDIA

QUESTION 1 ->

You Team must promote shark Tank India season 4, The senior come up with the idea to show highest funding domain wise so that new startups can be attracted, and you were assigned the task to show the same.

SOLUTION-> ✅ Objective:

To find the startup(s) with the highest deal amount in each industry from the shark_tank table.

- 🔹 Step 1: Create a Subquery
- 🔹 Step 2: Use the Subquery to Filter Only Top Ranked Startups

✅ **Final Output:**

- A table showing the **industry**, **deal amount**, and **only the top-funded startup(s)** in each industry.

QUERY

```
select * from (select industry,total_deal_amount_in_lakhs,row_number()
over(partition by industry order by total_deal_amount_in_lakhs desc) as rnk
from shark_tank
) as t where rnk<=1;
```

OUTPUT

	industry	total_deal_amount_in_lakhs	rnk
	Beauty/Fashion	300	1
	Education	150	1
	Electronics	200	1
	Entertainment	150	1
	Food	200	1
	Furnishing/Household	100	1
	Hardware	25	1
	Liquor/Beverages	200	1
	Manufacturing	200	1
	Medical/Health	250	1
	Others	40	1
	Services	150	1
	Sports	80	1
	Technology/Software	200	1
	Vehicles/Electrical Ve...	100	1

🔍 **Insight 1: Industry-wise Investor Preference**

Industries with the highest deal amounts indicate investor confidence and perceived profitability.

- For example, if the “Health & Wellness” industry has a startup with a ₹100 lakh deal, while “Food & Beverage” has a top deal of only ₹40 lakhs, it suggests investors are currently more bullish on Health & Wellness.
- This insight helps in targeting industries for future pitches, marketing, or startup strategy.

🔍 **Insight 2: Funding Disparity Across Industries**

Some industries attract significantly higher investments than others, revealing funding gaps or trends.

- You may notice industries like “Technology” or “Fintech” consistently have higher top deals, while others like “Handicrafts” or “Education” have lower ones.
- This disparity can inform policy makers, startup incubators, or new entrepreneurs where support or innovation is underfunded.

QUESTION 2 ->

You have been assigned the role of finding the domain where female as pitchers have female to male pitcher ratio >70%

SOLUTION->

🎯 **Goal:**

To find industries where the female-to-male presenter ratio is 70% or more — meaning, industries where female participation is high.

🧩 **Step-by-Step Explanation:**

🔹 Step 1: Group by Industry

🔹 Step 2: Filter Industries with Both Genders

🔹 Step 3: Filter for High Female Participation

📌 **Final Output:**

A table showing industries where female presenters are at least 70% compared to male presenters, along with the counts and calculated ratio.

QUERY

```sql
select * from (SELECT industry,sum(Male_Presenters) as sum_of_males ,
sum(Female_Presenters) as sum_of_females,
round((sum(Female_Presenters)/sum(Male_Presenters))*100,2)
as ratio from shark_tank_india.shark_tank
group by industry having sum(Female_Presenters)> 0 and sum(Male_Presenters)>0) as t where ratio>=70;
```

OUTPUT

	industry	sum_of_males	sum_of_females	ratio
▶	Beauty/Fashion	90	77	85.56
	Education	15	11	73.33
	Animal/Pets	7	5	71.43

✅ **Insight 1:**

Some industries have strong female leadership.
👉 These industries attract more women-led startups or teams with higher female participation.
This shows growing gender diversity and can inspire more women to enter those industries.

✅ **Insight 2:**

Female entrepreneurs are not equally spread across all industries.
👉 Only a few industries have high female-to-male ratios.
This means there is still a gender gap in other industries, and those areas may need more support and encouragement for women founders.

QUESTION 3 ->

You are working at marketing firm of Shark Tank India, you have got the task to determine volume of per season sale pitch made, pitches who received offer and pitches that were converted.Also show the percentage of pitches converted and percentage of pitches entertained.

SOLUTION->🎯 Goal:

To get season-wise stats:

- Total pitches
- How many got offers
- How many accepted offers
- Conversion rate
- Pitches entertained percentage

🧩 **Step-by-Step Breakdown:**

🔹 Step 1: Group by Season

- 🔹 Step 2: Count Total Pitches
- 🔹 Step 3: Count Offers Received
- 🔹 Step 4: Count Offers Accepted
- 🔹 Step 5: Calculate Conversion Rate
- 🔹 Step 6: Calculate Pitches Entertained Percentage

✅ **Final Output:**

You get one row per season showing:

- Total startups pitched
- How many got offers
- How many accepted
- Conversion rate (%)
- Entertained percentage (%)

QUERY

```
SELECT Season_Number,COUNT(*)  as 'total_pitches',
count(case when Received_Offer='Yes' then 1 end) as total_received_offer,
count(case when Accepted_Offer='Yes' then 1 end) as total_Accepted_offer ,
round((count(case when Accepted_Offer='Yes' then 1 end))/(count(*) )* 100,2)
as conversion_rate,
round((count(case when Received_Offer='Yes' then 1 end))/(count(*) )* 100,2)
as pitches_entertained_percentage
from shark_tank_india.shark_tank group by Season_Number;
```

OUTPUT

Season_Number	total_pitches	total_received_offer	total_Accepted_offer	conversion_rate	pitches_entertained_percentage
1	152	96	70	46.05	63.16
2	169	121	106	62.72	71.60
3	157	104	92	58.60	66.24

✅ **Insight 1:**

Seasonal improvement or decline in conversion rate shows investor interest.

👉 If the conversion rate increases over seasons, it means more startups are closing deals, which reflects better pitch quality or higher investor confidence.

✅ **Insight 2:**

High 'pitches entertained percentage' but low 'conversion rate' signals missed opportunities.

👉 If many startups receive offers but few accept them, it may suggest:

- Valuation mismatches
- Sharks' deals not appealing enough
- Founders being selective

This helps investors improve offer terms and helps startups prepare better.

QUESTION 4 ->

As a venture capital firm specializing in investing in startups featured on a renowned entrepreneurship TV show, you are determining the season with the highest average monthly sales and identify the top 5 industries with the highest average monthly sales during that season to optimize investment decisions?

SOLUTION->

🎯 **Goal:**

To identify the season with the highest average monthly sales and then list the top 5 industries (by average monthly sales) in that season.

🧩 **Step-by-Step Breakdown:**

🔹 Step 1: Find the Best Performing Season

🔹 Step 2: Check the Value of the Season

🔹 Step 3: Find Top 5 Industries in That Season

📊 **Final Output:**

You get:

1. The **season** with the highest average monthly sales.
2. The **top 5 industries** within that season based on **average monthly sales**.

QUERY

```
set @season:=(select Season_Number from shark_tank_india.shark_tank
group by Season_Number order by avg(Monthly_Sales_in_lakhs)
desc limit 1 );
select @season;
select industry , round(avg(Monthly_Sales_in_lakhs),2) as average_monthly_sales
from shark_tank_india.shark_tank where Season_Number=@season group by industry
order by average_monthly_sales desc limit 5;
```

OUTPUT

industry	average_monthly_sales
Electronics	3500
Furnishing/Household	96.27
Beauty/Fashion	61.65
Food	41.28
Services	29

QUESTION 5->

As a data scientist at our firm, your role involves solving real-world challenges like identifying industries with consistent increases in funds raised over multiple seasons. This requires focusing on industries where data is available across all three seasons. Once these industries are pinpointed, your task is to delve into the specifics, analyzing the number of pitches made, offers received, and offers converted per season within each industry.

SOLUTION->

🔧 **Step-by-Step Solution**

✅ Step 1: Identify Consistently Growing Industries

✅ Step 2: Filter Main Data Using Growing Industries

✅ Step 3: Aggregate Metrics for Each Season & Industry

🎯 **Summary of What This Query Achieves**

1. Finds industries with steadily increasing funding across all 3 seasons.
2. Displays season-wise stats for those industries:
    - Pitch count
    - Offer received count
    - Offer accepted count

QUERY

```
select industry,Season_Number,count(Pitch_Number) as total_pitch,count(case when Received_Offer='Yes' then 1 end) as offer_received,
(count(case when Accepted_Offer='Yes' then 1 end)) as accepted from shark_tank_india.shark_tank
where industry in  (select industry from (SELECT
        industry,
        ROUND(SUM(CASE WHEN Season_Number = 1 AND Accepted_Offer = 'Yes' THEN Total_Deal_Amount_in_lakhs END), 2) AS season1,
        ROUND(SUM(CASE WHEN Season_Number = 2 AND Accepted_Offer = 'Yes' THEN Total_Deal_Amount_in_lakhs END), 2) AS season2,
        ROUND(SUM(CASE WHEN Season_Number = 3 AND Accepted_Offer = 'Yes' THEN Total_Deal_Amount_in_lakhs END), 2) AS season3
    FROM
        shark_tank_india.shark_tank
    GROUP BY
        industry
) AS t
WHERE
    season1 IS NOT NULL AND
    season2 IS NOT NULL AND
    season3 IS NOT NULL AND
    season1 < season2 AND
    season2 < season3)
group by Season_Number,industry
order by industry;
```

OUTPUT

industry	Season_Number	total_pitch	offer_received	accepted
Agriculture	1	2	1	1
Agriculture	2	1	1	1
Agriculture	3	1	1	1
Beauty/Fashion	1	26	17	14
Beauty/Fashion	2	31	24	20
Beauty/Fashion	3	38	25	20
Technology/Software	1	12	10	5
Technology/Software	2	14	9	9
Technology/Software	3	23	16	16

📈 **Insight 1: Industries with Sustained Investor Confidence**

The industries that show a **year-on-year increase in total deal amounts** across Season 1, 2, and 3 indicate:

- **Sustained investor confidence** and performance.
- These industries are likely solving real problems or operating in high-demand markets.

✅ **Why this matters for a VC firm:**
You should prioritize scouting startups from these sectors for your deal pipeline, as they show strong historical growth and consistent backing from investors.

📊 **Insight 2: Strong Pitch-to-Offer Conversion Rates in Selected Industries**

Among these growing industries, those with:

- High pitch volumes
- High ratio of offers received and accepted

...suggest:

- High **market readiness** of startups.
- Better presentation and traction.
- Strong **alignment with investor expectations**.

✅ **Why this matters:**
It shows not only are these industries growing in deal size, but they are also **efficient at converting investor interest**, making them ideal for targeted VC investment and mentorship.

QUESTION 6-> **Every shark wants to know in how much year their investment will be returned, so you must create a system for them, where shark will enter the name of the startup's**

and the based on the total deal and equity given in how many years their principal amount will be returned and make their investment decisions.

SOLUTION->

✅ **Step-by-Step Explanation**

🔧 Step 1: Create the Procedure

🔍 Step 2: Begin Logic with CASE Block

❌ Step 3: First Condition – Revenue Not Mentioned

❌ Step 4: Second Condition – Offer Not Accepted

✅ Step 5: Else – Calculate Return Time

🛑 Step 6: End Case and Procedure

▶️ Step 7: Call the Procedure

QUERY

```
delimiter //
create procedure investment_return_time(in startup varchar(100))
begin
    case
      when
            (select Accepted_offer='Yes' and Yearly_Revenue_in_lakhs='Not Mentioned'
            from shark_tank where Startup_Name=startup)
              then select 'investment return time not be calculate';

        when
            (select Accepted_offer='No'
            from shark_tank where Startup_Name=startup)
               then select 'can not be calculated because offer is not accepted';

        else
           select `Startup_Name`,`Yearly_Revenue_in_lakhs`,`Total_Deal_Amount_in_lakhs`,
           `Total_Deal_Equity_in_per`,
           `Total_Deal_Amount_in_lakhs`/((`Total_Deal_Equity_in_per`*`Yearly_Revenue_in_lakhs`)/100)
            as years from shark_tank
           where Startup_name=startup;
  end case;
  end
 // delimiter;
call investment_return_time('BoozScooters');
```

OUTPUT

	Startup_Name	Yearly_Revenue_in_lakhs	Total_Deal_Amount_in_lakhs	Total_Deal_Equity_in_per	years
▶	BoozScooters	4	40	50	20

💡 **Insight 1: ROI Time Helps Sharks Prioritize Fast-Returning Startups**

- Identify startups that will **return the principal faster**.
- Make **quicker and data-driven investment decisions**.

- Filter out startups with **unfavorable ROI timelines**.

✅ **Business Benefit:**
Speeds up decision-making and helps sharks **allocate capital more efficiently** toward high-performing startups.

📊 **Insight 2: Equity Allocation Directly Affects Return Time**

This system makes it evident that:

- **Higher equity** in a **high-revenue startup** = **faster return**.
- A **small equity percentage** in a **low-revenue startup** = **slower or riskier return**.

✅ **Business Benefit:**
Sharks can **negotiate equity more strategically**:

- Ask for **more equity** if the revenue is low to ensure quicker ROI.
- Accept **less equity** only when projected revenue justifies it.

QUESTION 7 ->

In the world of startup investing, we're curious to know which big-name investor, often referred to as "sharks," tends to put the most money into each deal on average.This comparison helps us see who's the most generous with their investments and how they measure up against their fellow investors.

SOLUTION->

✅ **Step-by-Step Solution**

🧩 Step 1: Start the SELECT Statement

💸 Step 2: Calculate Average Investment for Each Shark

🗃️ Step 3: Data Source

QUERY

```
select  'Average deal' as sharkname,
        round(avg(case when Namita_Investment_Amount_in_lakhs>0 THEN Namita_Investment_Amount_in_lakhs END),2) as Namita,
        round(avg(case when Vineeta_Investment_Amount_in_lakhs>0 THEN Vineeta_Investment_Amount_in_lakhs END),2) as Vineeta,
        round(avg(case when Anupam_Investment_Amount_in_lakhs>0 THEN Anupam_Investment_Amount_in_lakhs END),2) as Anupam,
        round(avg(case when Aman_Investment_Amount_in_lakhs>0 THEN Aman_Investment_Amount_in_lakhs END),2) as Aman,
        round(avg(case when Peyush_Investment_Amount_in_lakhs>0 THEN Peyush_Investment_Amount_in_lakhs END),2) as Peyush,
        round(avg(case when Ashneer_Investment_Amount>0 THEN Ashneer_Investment_Amount END),2) as Ashneer,
        round(avg(case when Amit_Investment_Amount_in_lakhs>0 THEN Amit_Investment_Amount_in_lakhs END),2) as Amit from shark_tank
```

OUTPUT

	sharkname	Namita	Vineeta	Anupam	Aman	Peyush	Ashneer	Amit
▶	Average deal	32.94	31.25	29.99	34.18	35.06	25.68	35.27

💰 **Insight 1: High Average Investment Reflects Greater Risk Appetite and Confidence**

If a shark consistently invests **larger amounts per deal**, it signals:

- **Greater confidence** in the startups they choose.
- A **higher risk tolerance** and willingness to make bold bets.
- They may focus on **scaling startups quickly** by giving more capital upfront.

✅ **Business implication:**
Such sharks are ideal partners for startups looking for **aggressive growth**, and they might expect **greater control or equity** in return. Entrepreneurs aiming for rapid scaling might prioritize pitching to these sharks.

⚖️ **Insight 2: Variance in Average Deal Size Reveals Investment Strategy**

By comparing average deal sizes:

- Sharks with **lower average investments** might:
  - Diversify across many startups.
  - Minimize risk by spreading capital.
- Sharks with **higher average investments** might:
  - Be more selective.
  - Focus on a few high-potential startups.

✅ **Business implication:**
Understanding each shark's average deal size helps you:

- **Profile their investment strategy** (diversifier vs. focused investor).
- Match startup needs with the right investor personality (risk-tolerant vs. cautious).

QUESTION 8 ->

Develop a stored procedure that accepts inputs for the season number and the name of a shark. The procedure will then provide detailed insights into the total investment made by that specific shark across different industries during the specified season. Additionally, it will calculate the percentage of their investment in each sector relative to the total investment in that year, giving a comprehensive understanding of the shark's investment distribution and impact.

SOLUTION->

🎯 **Objective:**

You want a reusable system (stored procedure) where a shark's name and season number are inputs.
The output will show:

- Total amount invested by that shark in that season by industry.
- The percentage of the shark's season investment that each industry received.

✅ **Step-by-Step Breakdown:**

🔧 1. Procedure Definition Begins

🔁 2. Case Statement Handles Each Shark

🧨 3. ELSE Case: Handles Invalid Shark Input

📝 4. Procedure Ends

QUERY

```
delimiter //
create procedure details(in season int,in shark varchar(100))
begin
    case
        when shark='Namita'
        then set @total=(select round(sum(Namita_Investment_Amount_in_lakhs),2)
        from shark_tank where Season_Number=season);
        select Industry,round(sum(Namita_Investment_Amount_in_lakhs),2) as sum,
        round((sum(Namita_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
        from shark_tank where Season_Number=season and
        Namita_Investment_Amount_in_lakhs>0
        group by Industry;

        when shark='Vineeta'
        then set @total=(select round(sum(Vineeta_Investment_Amount_in_lakhs),2)
        from shark_tank where Season_Number=season);
        select Industry,round(sum(Vineeta_Investment_Amount_in_lakhs),2) as sum,
        round((sum(Vineeta_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
        from shark_tank where Season_Number=season and
        Vineeta_Investment_Amount_in_lakhs>0
        group by Industry;

        when shark='Anupam'
        then set @total=(select round(sum(Vineeta_Investment_Amount_in_lakhs),2)
        from shark_tank where Season_Number=season);
        select Industry,round(sum(Anupam_Investment_Amount_in_lakhs),2) as sum,
        round((sum(Anupam_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
        from shark_tank where Season_Number=season and
        Anupam_Investment_Amount_in_lakhs>0
        group by Industry;
```

```
when shark='Aman'
then set @total=(select round(sum(Aman_Investment_Amount_in_lakhs),2)
from shark_tank where Season_Number=season);
select Industry,round(sum(Aman_Investment_Amount_in_lakhs),2) as sum,
round((sum(Aman_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
from shark_tank where Season_Number=season and
Aman_Investment_Amount_in_lakhs>0
group by Industry;

when shark='Peyush'
then set @total=(select round(sum(Peyush_Investment_Amount_in_lakhs),2)
from shark_tank where Season_Number=season);
select Industry,round(sum(Peyush_Investment_Amount_in_lakhs),2) as sum,
round((sum(Peyush_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
from shark_tank where Season_Number=season and
Peyush_Investment_Amount_in_lakhs>0
group by Industry;

when shark='Amit'
then set @total=(select round(sum(Amit_Investment_Amount_in_lakhs),2)
from shark_tank where Season_Number=season);
select Industry,round(sum(Amit_Investment_Amount_in_lakhs),2) as sum,
round((sum(Amit_Investment_Amount_in_lakhs)/@total)*100,2) as `%`
from shark_tank where Season_Number=season and
Amit_Investment_Amount_in_lakhs>0
group by Industry;
```

```
        when shark='Ashneer'
        then set @total=(select round(sum(Ashneer_Investment_Amount),2)
        from shark_tank where Season_Number=season);
        select Industry,round(sum(Ashneer_Investment_Amount),2) as sum,
        round((sum(Ashneer_Investment_Amount)/@total)*100,2) as `%`
        from shark_tank where Season_Number=season and
        Ashneer_Investment_Amount>0
        group by Industry;

        else
           select 'this is incorrect input';
    end case;
end //
delimiter;
drop procedure details
call details(1,'Aman');
```

OUTPUT

Industry	sum	%
Food	253.33	28.24
Beauty/Fashion	152.83	17.04
Vehicles/Electrical Vehicles	50	5.57
Education	62.5	6.97
Manufacturing	75	8.36
Technology/Software	63.33	7.06
Medical/Health	125	13.94
Electronics	100	11.15
Animal/Pets	15	1.67

💡 **Insight 1: Identifying Each Shark's Preferred Investment Domains**

By calculating the **industry-wise distribution** of a shark's total investments in a season:

- You can clearly see which **industries a shark prefers**.
- If a shark consistently invests **heavily in a few domains** (e.g., health, tech, fashion), it reveals their **strategic focus or expertise**.
- Conversely, **diversified investment across many industries** shows a generalist investment strategy.

✅ **Business Use:**
This helps entrepreneurs **target the right sharks** based on their startup's industry and **tailor their pitches** accordingly.

📊 **Insight 2: Measuring Shark's Impact and Investment Influence in Specific Sectors**

By calculating the **percentage of total investment** each shark made per industry:

- You uncover how much **influence or control** a shark might hold in specific sectors.
- A **higher % in one sector** indicates dominance or deep interest in that market.

✅ **Business Use:**
Venture firms and analysts can **benchmark sharks** to understand their **market-shaping roles** and even **predict future trends** based on their investment behavior.

QUESTION 9 ->

In the realm of venture capital, we're exploring which shark possesses the most diversified investment portfolio across various industries. By examining their investment patterns and preferences, we aim to uncover any discernible trends or strategies that may shed light on their decision-making processes and investment philosophies.

SOLUTION->

🎯 Objective of the Query

You are trying to find out:

- How diverse each shark's portfolio is (in terms of industry).
- How geographically spread their investments are (based on pitchers' city and state).
- Then you compare all sharks in a single view.

✅ Step-by-Step Solution

🔹 Step 1: Count industries and locations per shark

🔁 Step 2: Repeat for Each Shark

🧾 Step 3: Order the Final Result

QUERY

```
select  'Namita' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Namita_Investment_Amount_in_lakhs>0
union all
select  'Vineeta' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Vineeta_Investment_Amount_in_lakhs>0
union all
select  'Aman' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Aman_Investment_Amount_in_lakhs>0
union all
select  'Peyush' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Peyush_Investment_Amount_in_lakhs>0
union all
select  'Amit' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Amit_Investment_Amount_in_lakhs>0
union all
select  'Anupam' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Anupam_Investment_Amount_in_lakhs>0
union all
select  'Ashneer' as shark,count(distinct Industry) as 'total industries',
count(distinct concat(Pitchers_city,' ,', Pitchers_state)) as 'unique locations' FROM shark_tank
where Ashneer_Investment_Amount>0 order by `total industries` desc;
```

OUTPUT

shark	total industries	unique locations
Aman	15	45
Peyush	15	34
Anupam	13	33
Namita	12	38
Vineeta	11	32
Amit	10	22
Ashneer	8	13

💡 Insight 1: Diversified Sharks Minimize Risk and Maximize Market Presence

A shark investing across many different industries shows a diversification strategy aimed at reducing risk.

- Instead of depending on one domain (like tech or fashion), they spread their bets across sectors like health, fintech, sustainability, etc.
- This reduces the impact of a downturn in any one industry and increases the chance of high returns from emerging sectors.

✅ **Business Impact:**
Such sharks are less biased and more open to innovation from all sectors, making them attractive for early-stage startups in niche domains.

📊 Insight 2: Industry Spread Reflects Investment Philosophy and Vision

The type of industries a shark invests in (and how many) reveals their personal or professional alignment:

- A broad spread suggests a data-driven or opportunistic investor, willing to explore new trends.
- A narrow focus suggests a strategic investor—someone who sticks to their expertise (e.g., tech, consumer goods, health).

✅ **Business Impact:**
Startups can analyze this pattern to target the right shark, aligning their pitch with the shark's past interest and future vision