

## SQL Interview Questions List

S.No.	Question	Table Structure	Comments	Difficulty Level	Benchmarked?
1	Sales are reported across quarters for stores. There are 100 stores and there are 4 quarters for each store (a total of 400 rows). Find out the difference in sales between the adjacent quarters of the same store (Q4-Q3, Q3-Q2, Q2-Q1)	Refer: Table 1 Sample	a) Using loops to solve is acceptable	Medium	Yes
2	If for above question loops was the answer, increase the number of stores to 10k and quarters to 1k.	Refer: Table 1 Sample	a) Using loops is not acceptable because of computational limitations	Medium	Yes
3	Stores undergo renovation in some quarters. Under the renovation period, stores are shut down and no sales figures are reported. One store is closed down for exactly on quarter and not more. Those records would be missing from the table. Again there are 100 unique stores and 4 quarters. But instead of the ideal 400 records, this time there are lesser records. Find out such missing quarters for each store	Refer: Table 1 Sample	a) Using a where clause with sales = 0 is not an acceptable answer since the record is missing b) Some candidates might say since there are only 4 quarters, the total is a constant of 10. Taking a difference from 10 would yield the missing quarter. This is acceptable.	Medium	Yes
4	If using a difference from 10 was the answer to the previous question, increase stores to 500 and quarters to 96. One store is closed down for exactly two adjacent quarters and not more (example, 1,2 or 2,3 or 3,4 etc.)	Refer: Table 1 Sample	a) Using a difference from 96 would not work in this case	Hard	Yes
5	Now, instead of the store shutting down for two adjacent quarters, it is closed down for a sequence of quarters. The sequence ranges could range from a minimum of 3 quarters to a maximum of 12 quarters. Find out the start and end quarters of the missing sequence for each store. There are 500 unique stores and 96 unique quarters	Refer: Table 1 Sample	NA	Hard	Yes
6	Here instead of the store shutting down for one sequence of quarters, it is shut down for multiple sequence of quarters. The sequence of missing quarters could range from a minimum of 3 quarters to a maximum of 12 quarters. For example, Store 1 could have undergone renovation in quarters, 1,2,3 and 11,12,13,14,15 and 33,34. Find out the maximum gap of missing quarters for each store. In the above example it would be between 11 and 15.	Refer: Table 1 Sample	NA	Hard	Yes
7	Explain a use case where you would use a self join	NA	NA	Easy	Yes
8	Explain a use case where you would use a cross join	NA	NA	Easy	Yes
9	There is a school day function coming up, and the principal wants to award the first and second rank holders from the 12th standard. Find out who are those candidates from the table provided. There are 50 students in the class. The total marks are out of 500.	Refer: Table 3 Sample	NA	Medium	Yes
10	The principal now wants to award not just the 12th standard students, but the first and second rank holders from each class. Find out such students from the table provided. There are 12 standards and there are 50 students in each class. The total marks are out of 500.	Refer: Table 2 Sample	NA	Medium	Yes
11	Compute the value of the 95th percentile	Refer: Table 4 Sample	Using pre-built SQL functions like percent_rank is acceptable	Easy	Yes
12	Compute the value of the 95th percentile without using pre-built SQL functions	Refer: Table 4 Sample	If the candidate does not know about percentiles, no	Medium	Yes
13	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Find out the cumulative number of orders which have been placed in across months	Refer: Table 5 Sample	NA	Medium	Yes
14	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Find out the YoY difference by month (2018 Vs 2017) for all orders that have been tracked in the transaction table	Refer: Table 5 Sample	NA	Easy	Yes
15	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. How would you find out the 5th order placed by each customer from the table provided?	Refer: Table 5 Sample	NA	Easy	Yes
16	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. In the above table, if the customer has no 5th order, the order should read 0	Refer: Table 5 Sample	NA	Medium	Yes
17	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. In the table provided, determine the average time taken (in days) between the first and the second order.	Refer: Table 5 Sample	NA	Medium	Yes
18	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Get the list of customers who made a transaction in 2017 but not in 2018 (customers who churned out)	Refer: Table 5 Sample	NA	Easy	Yes
19	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. The Device_Id can range between 1 and 10. Find out the device with the highest and lowest number of orders.	Refer: Table 5 Sample	NA	Easy	Yes
20	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. The Device_Id can range between 1 and 10. Find out the maximum and minimum number of orders for each device ID.	Refer: Table 5 Sample	NA	Easy	Yes
21	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Determine all Device_ID and Prod_ID combinations which contributed to less than 5% of the total number of orders.	Refer: Table 5 Sample	NA	Easy	Yes
22	Based on information provided in the tables, get output1 based on information in table 1 and table 2	Refer: Table 6 (complete information)	NA	Easy	Yes
23	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018. Find out the month in which each store started its operation. A store is considered to have started it's operation when it has 5 orders or more in a single month	Refer: Table 7 Sample	NA	Medium	Yes
24	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018. List down all the stores where the sales has never decreased month over month (star performance)	Refer: Table 7 Sample	NA	Medium	Yes
25	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018. Which store has the most number of loyal customers. A customer is considered to be loyal when he/she has made more than 5 orders from the same store.	Refer: Table 7 Sample	NA	Easy	Yes

26	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018. Based on the order value, assign customers to buckets based on bottom 20%, Middle 60% and the top 20%	Refer: Table 7 Sample	NA	Easy	Yes
27	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018 (12 months). Determine the customer active rates across months. Example customer active rate for Jan = Customers who transacted in Jan, and also in the next 11 months. Active rate for Feb = Customers who transacted in Feb and also in the next 10 months and so on.	Refer: Table 7 Sample	NA	Hard	Yes
28	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018 (12 months). Determine the loyal customers from the data. A customer is said to be loyal if he makes transactions for 3 consecutive months. Example Customer 123 is loyal if he transacts in Jan, Feb and Mar. Customer 456 is not loyal even if he makes transactions in Jan, Mar, May, Jul, Sep, Nov.	NA	NA	Medium	Yes
29	What is the order of execution of any SQL query?	NA	Candidate must not only give the order of execution, but must also explain why does it happen in that order	Easy	Yes
30	Order values are provided for 100 stores and the customers transacting from each store. The time frame given is for the whole year of 2018 (12 months). For each customer determine the store in which they were first active along with the month and the highest valued transaction	Refer: Table 7 Sample	NA	Medium	Yes
31	Validate phone no. and email of each employee in a list of 500 employees. Valid Phone No. is a 10 digit number. Valid email eg: help.g@gmail.com, no spaces and special characters except " "	Refer: Table 8 Sample	NA	Easy	Yes
32	Employee and sales details are provided with 100 stores. Determine the top performing employee for the top 5 stores and the bottom 5 stores	Refer: Table 8 Sample	NA	Easy	Yes
33	Employee salary details are provided for 100 employees between 2012-2018. Determine the total salary paid by the organization in each year	Refer: Table 9 Sample	NA	Easy	Yes
34	Employee salary details are provided for 100 employees between 2012-2018. Which the employee with the highest increment in salary?	Refer: Table 9 Sample	NA	Easy	Yes
35	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Determine the no. of orders in each quarter between 1st Jan 2018 to 31 Dec 2018	Refer: Table 5 Sample	NA	Easy	Yes
36	Employee salary details are provided for 100 employees between 2012-2018. Select all employees with more than 20% increment in 2017.	Refer: Table 9 Sample	NA	Easy	Yes
37	Employee salary details are provided for 100 employees between 2012-2018. Determine the tax payable by each employee for the current fiscal year at 1) <500,000: 5% 2) 500,000 - 1,000,000: 10% 3) > 1,000,000: 15%	Refer: Table 9 Sample	NA	Easy	Yes
38	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Concat all products purchased by a customer into a single column	Refer: Table 5 Sample	NA	Medium	Yes
39	GDP and populations of all countries has been provided. Select all countries which have GDP per capita greater than the 5th highest GDP per capita in Asia	Refer: Table 10 Sample	NA	Easy	Yes
40	GDP and populations of all countries has been provided. Select all countries that are in the same continent other than Europe whose population is closest to the country with the 5th highest GDP per capita in Europe	Refer: Table 10 Sample	NA	Easy	Yes
41	GDP and populations of all countries has been provided. Determine the continent with the most no. of countries having a population density of > 80 per km sq	Refer: Table 10 Sample	NA	Easy	Yes
42	Contact details of 500 customers have been provided. Duplicates of the same customer may be present. In case contact details are missing from a record, use the latest record of a customer to fill in the missing detail	Refer: Table 11 Sample	NA	Medium	Yes
43	The orders information is available for customers who made a purchase between 1st Jan 2018 and 31st Jan 2019. Select all customers who have purchased the most valuable product in 2019	Refer: Table 5 Sample	NA	Easy	Yes
44	GDP, population and land area of all countries has been provided. Select the country not in Europe with the least GDP having a population density lower than the lowest GDP country in Europe	Refer: Table 10 Sample	NA	Easy	Yes
45	Execute Outer Join without specifying FULL OUTER JOIN	NA	Can use other joins and functions	Medium	Yes
46	How to identify distinct combinations of certain columns without using DISTINCT	NA		Easy	Yes
47	From a table having list of employees and their CTC for a year, identify the employee who gets the 10th best salary	NA		Medium	Yes
48	For a company having 400 employees, the table having yearly salary component has NULLs for certain employees. This needs to be replaced with the average of the remaining employees falling under the same designation/position.	Refer: Table 12 Sample	Needs to be executed in a single query	Medium	Yes
49	From a table that has customer and transaction dates, find out the number of transactions made by the customer in a year and bucket it in the range of 20	NA	Bucketing should be done based on a logic (ex:- (#Transaction/20) and rounding this to get lower and upper range)	Medium	Yes
50	We have Store ID and Open Dt in a data set. Identify the number of stores opened as of each month.	NA	As of each month is YTD to that month. The stores would also not shut down in between.	Medium	Yes
51	For a company having 400 employees, the table having yearly salary component has NULLs for certain employees. This needs to be replaced with the average of the remaining employees falling under the same designation/position. On top of this, we need to identify the monthly cost incurred for the company based on their joining date	Refer: Table 13 Sample	For Feb, the cost incurred would be (January + February) for people who joined before Feb and only February salary for people who joined in Feb	Hard	Yes
52	How many customers have more than an year of relationship with the company? Relationship is the time difference between customers first interaction and latest interaction.	Refer: Table 14 Sample		Easy	Yes
53	Flag all transactions where the unit price of the product sold was more than the average unit price of the same product across years. (Note : The same product can be sold in different rates to different customers)	Refer: Table 14 Sample	Intermediate Tables can be created	Medium	Yes
54	Provide the list of customers who: Have never interacted with the company in the last 6 months but have interacted at least once in the past one year.	Refer: Table 14 Sample	Intermediate Tables can be created	Medium	Yes

55	For customers who made more than two transactions, what is the gap (in days) between first and second transaction? (Not first and Last)	Refer: Table 14 Sample	Intermediate Tables can be created	Medium	Yes
	Provide a summary which shows : (Per Customer) a. #Transactions Made b. #Distinct products sold c. Total Sales d. First Transaction Date e. Last Transaction Date				
56		Refer: Table 14 Sample		Easy	Yes
57	Provide a table which shows Month wise sales for 2018 and the YoY from 2017	Refer: Table 14 Sample	Intermediate Tables can be created	Medium	Yes
58	For customers who made more than two transactions, what is average gap between two transactions of the customer?	Refer: Table 14 Sample	Intermediate Tables can be created	Medium	Yes
	How many stores were existing per month in 2018 (Jan 2018 to Dec 2018) Sample Output : Jan - 800 stores existing Feb - 400 stores existing				
59		Refer: Table 15 Sample	Intermediate Tables can be created	Medium	Yes
60	a. Which month had the highest store openings b. Which month had the highest store closures	Refer: Table 15 Sample		Easy	Yes
61	A customer is deemed churned if he has not interacted in the past 6 months. How many customers were active per month in 2017?	Refer: Table 14 Sample	Intermediate Tables can be created	Hard	Yes
	For every manager - Show two values : #Reportee from same city as manager		NA		
62	#Reportee from different city compared to manager	Refer: Table 16 Sample		Easy	Yes
63	What is the average difference in Salary between a manager and his reportee	Refer: Table 16 Sample	NA	Easy	Yes
64	Who is the top earning member under every Manager	Refer: Table 16 Sample	NA	Medium	Yes
65	Who is the top earning Employee in every department	Refer: Table 16 Sample	NA	Medium	Yes
66	How many employees earn more than the average salary in their designation	Refer: Table 16 Sample	NA	Easy	Yes
67	Query to find and remove duplicates from a table	Refer: Table 17 Sample	NA	Medium	Yes
68	Query to find the distinct domain from email column( Result to show :gmail, yahoo, hotmail)	Refer: Table 18 Sample	NA	Medium	No
69	You are in the HR dept in the company and have an event log that records every time a user enters/leaves the office. Write an SQL query to find out employees who entered later than 12 PM and left work within 6 hours.	Refer: Table 19 Sample	NA	Medium	Yes
70	IF there are employees whose swipe in time is less than the time frame and swipe out time is greater than the time frame, then all of these empIDs should be shown as the result	Refer: Table 19 Sample	NA	Medium	No
71	Write a sql query to get the total hours spent in office by an employee in day	Refer: Table 19 Sample	NA	Medium	Yes
72	Suppose that in a Table named Team contains 4 records, Create a schedule that has every team playing once against the opponent team.	Refer: Table 20 Sample	NA	Hard	Yes
73	SQL Query that finds the Ids with the genre Action and Comedy	Refer: Table 21 Sample	NA	Easy	Yes
74	Create an empty table from an existing table	NA	NA	Easy	Yes
75	Write a SQL query to fetch all the Employees who are also managers	Refer: Table 23 Sample	NA	Easy	Yes
76	Fetch the details of all the employees whos salary is 10k less than the average salary of their project	Refer: Table 23 Sample	Please leave the manager's salary out for this calculation	Medium	Yes
77	Find the number of transaction each customer made in their last month	Refer: Table 24 Sample	NA	Medium	Yes
78	What is the difference between BETWEEN and IN operators in SQL?	NA	NA	Easy	Yes
79	Sales are reported for each week for each year at Store level. Compute Rolling 4 weeks sales of each store in a year. Note: Week Number column is a string	Refer: Table 25 Sample	NA	Hard	Yes
80	Sales are reported for each week for each year at Store level. Compute Year Start to week sales of each store in a year. Note: Week Number column is a string	Refer: Table 25 Sample	NA	Hard	Yes
81	Sales are reported at Department-Category level. Display all the categories within the departments where the department sales is more than \$120000	Refer: Table 26 Sample	NA	Medium	Yes
82	Sales are reported at Department-Category level. Display all the categories where the sales in that category is more than every other department	Refer: Table 26 Sample	NA	Hard	Yes
83	Sales are reported at Department-Category level. Display the largest category by sales within each department without using aggregate function	Refer: Table 25 Sample	use Nested Select only	Medium	Yes
84	Use Table 27, Table 28 to get Table 29	Refer: Table 25 Sample	should know to use coalesce	Easy	Yes
85	What is index and where can it be used?	NA	NA	Easy	Yes
86	How to remove duplicate records from a table?	NA	NA	Easy	Yes
87	Use Table 30 to Compute Average Time spent by employee inside office for each check-in	NA	NA	Easy	Yes
88	How to fetch common records from two different tables A and B which has not any joining condition	NA	NA	Easy	Yes
89	Giving Rank to non repeating values in a column without using rank().	NA	NA	Medium	Yes
90	How would you calculate the retention rate of customers at a week level?	Refer: Table 31 Sample	Retention Rate: Customers joined in 1 year prior to latest 3 months, how many out of them have transacted in latest 3 months. eg. For 201812, retention rate = #Customer transacted in 201801 to 201812 and joined in 201701 to 201752/#Customers joined in 201701 to 201752	Hard	Yes
91	How would you calculate the monthly frequency in days?	Refer: Table 32 Sample	Monthly frequency: 30/AOG AOG = Average order gap between transactions in days	Medium	Yes
92	Data: Student id, subject, marks (5 subject for each student), Who is the topper of the school?	NA	Note: Limit 1 will not work as two student can also have same marks	Easy	Yes
93	Number of rows in following tables left, right, cross and inner join	Refer: Table 33 Sample	NA	Easy	Yes
94	Dataset contains MatchID, match date , runs scored, balls faced. The idea is to find the strike rate till now. For match id 1 its calculated as runs scored/balls faced for match id 1. For match id 2, its calculated as cumulative sum runs scored for match 1 & match 2 / sum balls faced in match 1 & match 2	Refer: Table 34 Sample	Cumulative sum	Medium	Yes
95	We have Sales table in which we want to find rank of customer as per the amount paid. Please do not use CTE, RANK (related) or any ROW_NUM/ID function to derive the output.	Refer: Table 35 Sample	Rank without using window function	Medium	Yes
96	Generate all the prime numbers which are less than or equal to 100. No use of CTE or DB specific functions are allowed.	NA	NA	Hard	Yes
97	Dataset conatins date, apple id , app name and app usage hours in day level. Find the rolling last 7 days usage at app x day level x id level	Refer: Table 36 Sample	ID , apps and dates can be scaled	Medium	Yes
98	Without using CTE or any function please generate SQL sequence from 1-99 just by writing query. No DB specific function is allowed. Query should be generic enough for increased range.	NA	NA	Hard	Yes
99	Use table 37 to get table 38 as output	Refer: Table 37 and 38 Sample	Using loops to solve is acceptable	Hard	Yes
100	Calculate MoM, YoY and YTD for the given table	Refer: Table 39 Sample	Solve without using Lag function	Medium	Yes
101	Write a select query to pick zero rows from the given table	Refer: Table 39 Sample	Don't use any column for filtering	Easy	Yes
102	Write a query to get class total in front of each row	Refer: Table 40 Sample	NA	Easy	Yes

103	Transpose the given table	Refer: Table 41 Sample	Convert value inside product column as individual columns	Medium	Yes
104	Use table 42 and 43 to get table 44	Refer: Table 42 and 43 Sample	Using single select query (NULL is empty string)	Easy	Yes
105	There is a table where only one row is fully repeated. Write a Query to find the Repeated row	Refer: Table 45 Sample	NA	Easy	Yes
106	Write An SQL Query To Find The Position Of The Alphabet ('A') In The First Name Column From Worker Table	Refer: Table 46 Sample	NA	Easy	Yes
107	Write An SQL Query To Print Details Of The Workers Who Have Joined In Feb'2014.	Refer: Table 46 Sample	NA	Easy	Yes
108	Write An SQL Query To Fetch The List Of Employees With The Same Salary	Refer: Table 46 Sample	NA	Easy	Yes
109	Write An SQL Query To Show The Second Highest Salary From A Table	Refer: Table 46 Sample	NA	Medium	Yes
110	Write An SQL Query To Fetch The Departments That Have Less Than Five People In It	Refer: Table 46 Sample	NA	Easy	Yes
111	Write a sql query to find all the departments that have given any bonus before 1 year of service along with the count of people who have received the said bonus	Refer: Table 46 and 47 Sample	NA	Medium	Yes
112	Write a sql query to find all the managers who got a bonus before their promotion along with the total sum bonus for their entire department	Refer: Table 46, 47 and 48 Sample	NA	Hard	Yes
113	Find out all the stores who were active (currently open) at the beginning of each year	Refer: Table 49 Sample	In the given table, the storeID changes when the ownership of a store is transferred. Every store has a Geographic location tagged to it. When a store is transferred, the geolocation may or maynot change.	Medium	Yes
114	Find out all the stores whose ownership got transferred more than once	Refer: Table 49 Sample	Same goes with the type of store. All the previous and new IDs of a store are considered to be history and future of the same store.	Hard	Yes
115	For all the stores, find out how many of them have been through a location change as well as type change in 2018	Refer: Table 49 Sample		Easy	No
116	For all the stores that are open currently, find the OldestStoreID	Refer: Table 49 Sample		Hard	No
117	For all the stores that were first open in 2016, find the ID it had as of end of 2018	Refer: Table 49 Sample		Medium	No
118	How has the distribution of type of stores changed year over year	Refer: Table 49 Sample		Easy	No
119	What is the difference between DELETE, DROP and TRUNCATE statements?	NA	NA	Easy	No
120	Write a query to get the thrid highest salary of the employee	Refer: Table 50 Sample	NA	Easy	No
121	How many increments has each employee gone through in the first 5 years of their joining date	Refer: Table 50 Sample	Increment happens when the salary increases	Hard	No
122	What is the highest increment percentage of each year?	Refer: Table 50 Sample	NA	Medium	No
123	Find the median value of all salaries (total) from the table for every occupation	Refer: Table 51 Sample	NA	Hard	No
124	The Variable pay is an amount in thousands (1000 to 9999). The column has an error - trailing zeroes were not captured in the data. E.g. 1300 will be entered as 13. Create a new column with the corrected values i.e. the resulting column should have values in thousands	Refer: Table 51 Sample	NA	Medium	No
125	Identify the most common occupation and the highest paid occupation	Refer: Table 51 Sample	NA	Easy	No
126	What % of employees had one of the top 3 highest paid occupations	Refer: Table 51 Sample	NA	Medium	No
127	How many occupations had a higher percentage of men than women?	Refer: Table 51 Sample	NA	Medium	No
128	How many occupations had a higher salary being offered to men compared to women?	Refer: Table 51 Sample	NA	Medium	No
129	How many men and women had fixed pay > 30000 and variable pay < 2000?	Refer: Table 51 Sample	NA	Easy	No
130	How many rows you will get if you will do a cross, left, right and inner join	Refer: Table 52 and 53 Sample	NA	Easy	No
131	Find the topper of the school	Refer: Table 54 Sample	NA	Medium	No
132	Get the list of the students who scored more than the average.	Refer: Table 54 Sample	NA	Medium	No
133	Order gap is the difference in days between two consecutive transactions of a customer, if it is his first transaction order gap will be null. Create a colum "order_gap" in the current table	Refer: Table 55 Sample	NA	Difficult	No
134	Calculate and compare the average basket value of new and returning customers (New customers have transaction=1). Final output should have both the averages in separate columns.	Refer: Table 56 Sample	NA	Difficult	No
135	Calculate YTD sales	Refer: Table 56 Sample	NA	Difficult	No
136	Get a list of all customers who transacted in 2017 but not in 2018	Refer: Table 56 Sample	NA	Medium	No
137	Get a list of customers at year month level who didn't transact after that year-month	Refer: Table 56 Sample	NA	Medium	No
138	Order the brands based on the premium level (Premium level is defined as cost of stay per night)	Refer: Table 57 & 58 Sample	Also ask him/her to validate the answer by hotel tier	Easy	No
139	What is the revenue per stay and revenue and night across each state	Refer: Table 57 & 58 Sample	NA	Easy	No
140	Get the nights/stay distribution for Fall-2019	Refer: Table 57 & 58 Sample	You can use ntile, percentile after getting the (stay_id, # nights)	Easy/Medium	No
141	Identify the # customers who stayed more than once (get this seperately for each campaign)	Refer: Table 57 & 58 Sample	a) Bring it to campaign, cust, stay level b) Count the number of stays per cust per campaign and remove count=1 c) Finally count the customers by campaign	Medium	No
142	Identify the # customers who stayed during all the campaigns atleast once	Refer: Table 57 & 58 Sample	a) Should use 'case when' to create 3 stay flags and then put where condition where all flags=1	Medium	No
143	In Summer-2019, how many stays are only weekday stays, only weekend stays and mixed stays (weekend - Friday, Saturday & Sunday)	Refer: Table 57 & 58 Sample	a) Have to create weekday flag and weekend flag first b) then max out the flags at stay level c) Then write 3 case whens to come up these 3 numbers	Hard	No
144	Calculate the Spring 2019's total liability incurred to the business if: a) A customer gets 2k points every 2nd stay b) A customer gets 750 points every night	Refer: Table 57 & 58 Sample	Get the stays distribution first and the apply points logic	Hard	No
145	Calculate new customers from the dataset(New customers are those who have visit num = 1) for the week 201801. Use Table 2 to get the week ID	Refer: Table 59 & 60 Sample	NA	Easy	No
146	Calculate the # of customers who have had at least 1 prior visit to the app. Use Table 2 to get the week ID	Refer: Table 59 & 60 Sample	NA	Easy	No
147	Calculate repeat, reactivated customers customers for Jan & Feb 2019. Repeat Customers: Visited the app more than 1 within 30 days. Reactivated Customers: Visited the app more than 1 within 60 days(no visits within the last 30 days).	Refer: Table 59 & 60 Sample	NA	Medium	No
148	Calculate the trial rate all customers for week 201901 at feature level. Trial Rate: Feature was used in the same week when app was installed(app installation: visit num =1). Eg: If 1000 people install App on their phone in week-10 2018 and the number of people who use Feature X in the same week is 14, then the Trial Rate for Feature X= 14/1000	Refer: Table 59 & 60 Sample	NA	Medium	No
149	Calculate the week 2 participation rate all customers at feature level. For eg: If 1000 people install App in week-10 2018 and out of these 1000 people, 900 people used Feature X in week-10 2018. In week-11 2018, out of 900 people who used Feature X in week-10 2018, 700 people reused the same feature in week-11. Participation rate for week 2 feature X would be 700/900	Refer: Table 59 & 60 Sample	NA	Hard	No
150	Rank customers in ascending order of their spend for the month of 201901	Refer: Table 61 Sample	NA	Easy	No
151	Segment customers based on their spending into deciles	Refer: Table 61 Sample	NA	Easy	No

152	Find Average Order Value, Spend Per Customer, # Orders per customers for the year 2018	Refer: Table 61 Sample	NA	Medium	No
153	Find Average Order Gap for customers. Keep this metric at decile level(Avg Order Gap of decile 1, Avg Order Gap of decile 2 etc	Refer: Table 61 Sample	NA	Medium	No
154	Rank without using partition functions	Refer: Table 61 Sample	NA	Medium	No
155	Find churn rate of customers for the month of Jan 2018. Churn rate= Customers who came in the month of Jan but did not come back for the next 3 months	Refer: Table 61 Sample	NA	Medium	No
156	Find the avg difference in days for a customers 1 st and 10 the purchase.	Refer: Table 61 Sample	NA	Easy	No
157	Find yearly, monthly, weekly GMV for New & Repeat Customers for the year 2018. GMV or Gross Merchandise Value is the Spend per customer for the stipulated time period. GMV for New customers at weekly level would be sum of sales of all new customers divided by all the new customers	Refer: Table 61 Sample	NA	Medium	No
158	Find RGMV of New & Repeat Customers for the year 2018. RGMV or residual GMV is the SPC excluding the first transaction of the customer	Refer: Table 61 Sample	NA	Hard	No
159	For all dates, find # customers active within the last 30, 60, 90 days. Sample output is shown	Refer: Table 61 Sample	NA	Hard	No
160	Using the above, find inactive customers for last 30,60,90 days	Refer: Table 61 Sample	NA	Hard	No
161	Find new store launch date. Store Launch date is taken as the week start date of the week from in there are at least 10 orders in a week.	Refer: Table 61 Sample	NA	Medium	No
162	Find the number od inactive stores in the complete data. Inactive store definition: Using store launch date(from the above question), calculate the number of orders in the 13th week from the launch date. If the number of orders is less than 5 then store is inactive	Refer: Table 61 Sample	NA	Medium	No
163	Create a flag at customer- date level. This flag will have a 1 value if the customer has used the service in the last 30 days. Use table 3	Refer: Table 61 Sample	NA	Hard	No