

YELLEVATE DISPUTE ANALYSIS

REFOCUS DIGITAL ACADEMY

Group 14 | Batch 7 | GROUP PROJECT 1 | CREATING A REPORT FOR YELLEVATE

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INTRODUCTION

Yellevate has been dealing with customer disputes for the past few years. Customers that express dissatisfaction with the company's services and refuse to pay for them are considered to be in disputes, according to Yellevate. The group will adhere to Google's five-phase data analysis process, which is ask, prepare, process, analyze, and share.

FIVE PHASES OF DATA ANALYSIS

ASK

In this phase, the team gathered all the information necessary for the task. The ask phase is also the phase where the team defines the problem statement or problem.

Problem

According to statistics, 20% of Yellevate disputes resulted in a payment opt-out. These have led to a 5% decrease in annual income (in USD). The data analyst team has now been asked by management to help solve the problem. Using data obtained by the company, the team must determine the causes of these problems and provide workable solutions.

Data Analysis Goals

Executives at the company decided that the following information should be obtained to identify the circumstances around the dispute problem:

1. The processing time in which invoices are settled (average # of days rounded to a whole number).
2. The processing time for the company to settle disputes (average # of days rounded to a whole number).
3. Percentage of disputes received by the company that were lost (within two decimal places).
4. Percentage of revenue lost from disputes (within two decimal places).
5. The country where the company reached the highest losses from lost disputes (in USD).

PREPARE

The “prepare” or preparation phase is where the team understands how the data is generated and collected. A good data source is ROCCC which stands for Reliable, Original, Comprehensive, Current, and Cited.

ROCCC Analysis:

- Reliable – MED – The data has been made available by Refocus specifically for this project
- Original – MED – Subject to the terms and conditions of the Data License Agreement by Yellevate.
- Comprehensive – HIGH – Data dictionary has been provided through this link.
- Current – HIGH – The latest data is in 2022.
- Cited – MED – All the data needed for this project can be accessed through this link.

PROCESS

This phase is where the team processes data to find the various inaccuracies, errors, or inconsistencies that could affect the data quality and analysis.

Methodology

The program that we used for data cleaning is pgAdmin 4 using PostgreSQL. The first thing to do was to create a new database and create a new table. To create a new table, the code is the following:

```
1  --create table yellevate to import
2  CREATE TABLE yellevate (
3      country varchar,
4      customer_id varchar,
5      invoice_number numeric,
6      invoice_date date,
7      due_date date,
8      invoice_amount numeric,
9      disputed numeric,
10     dispute_lost numeric,
11     settled_date date,
12     days_settled integer,
13     days_late integer
14 );
```

Figure 1: Creating yellevate to import data

Next is to import the dataset in pgAdmin. On the left side panel, right-click on the table that was created earlier, and then select Import/Export Data.

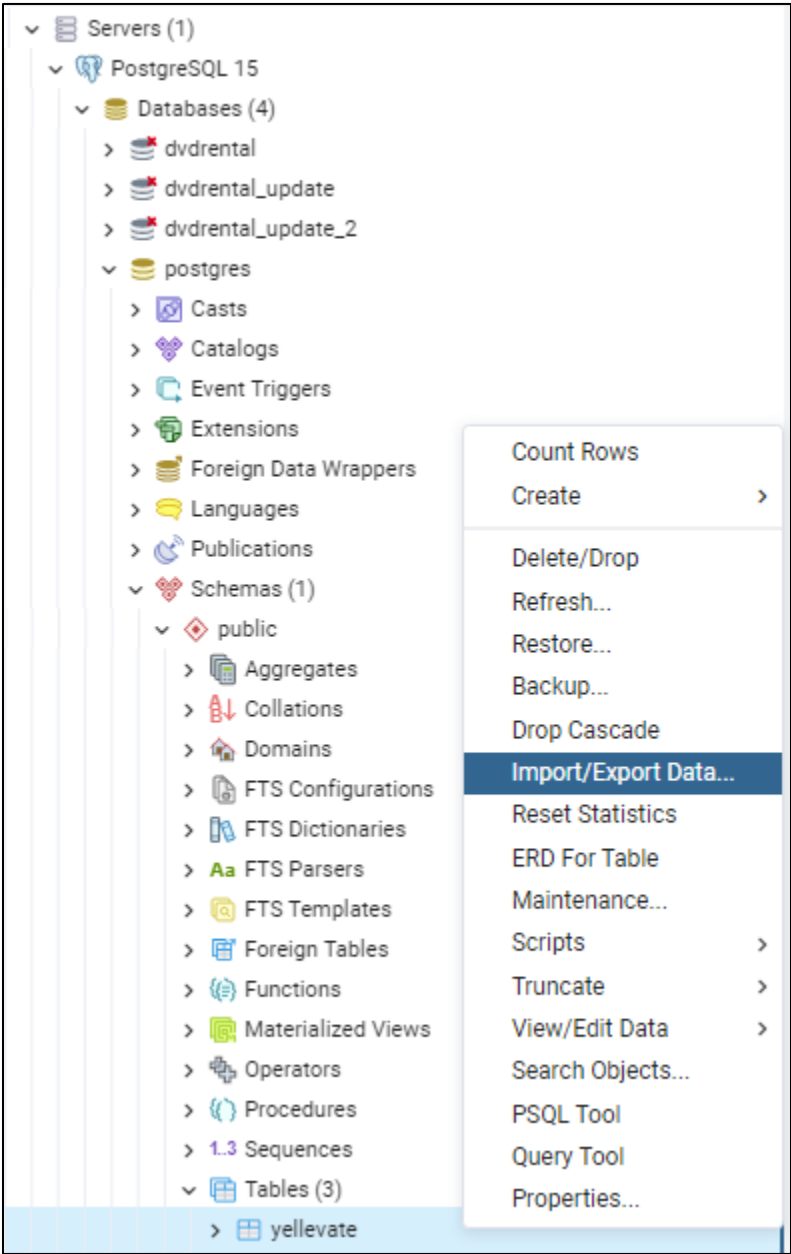


Figure 2: Importing the dataset (part 1)

Click on the folder icon to locate the file that needs to be imported. The format should be CSV and the encoding is UTF8. Hit OK to import the CSV file.

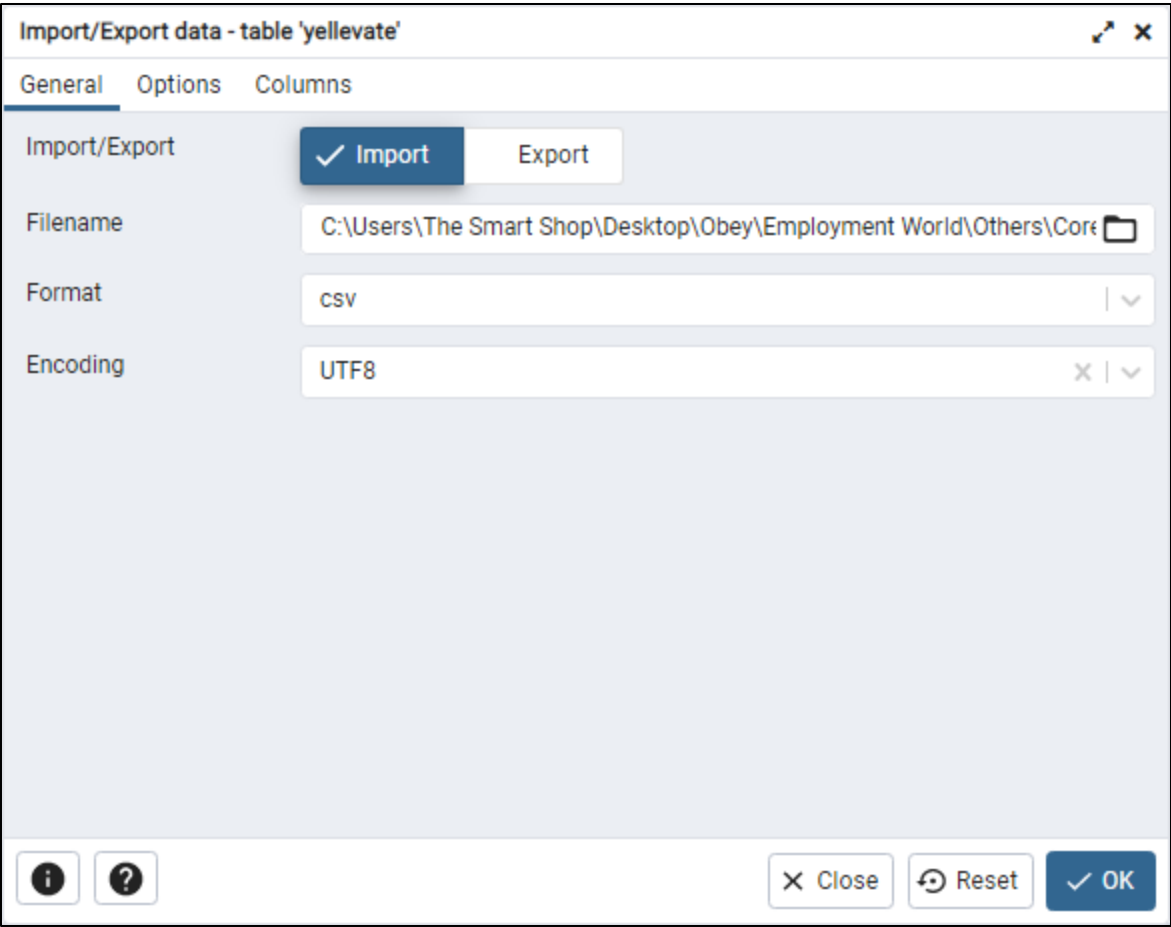


Figure 3: Importing the dataset (part 2)

Cleaning Data

One of the first things to do in cleaning data is to check the first row for inconsistencies or errors, in this case, the country column. The column that may be checked for using the DISTINCT function, we can see all of the listed countries. After executing the code, there are only five separate countries.

```
16 --check for inconsistencies in the country column
17 SELECT DISTINCT country
18 FROM yellevate;
```

Figure 4: Checking for inconsistencies in the country column

According to the data dictionary, the disputed field has a 0 or 1 value. "1" signifies the customer disputed the invoice while "0" means they did not. When this table is provided to clients, they must understand what the numbers 0 and 1 signify. Using the SQL code below, the team has added a new column disputed_or_not that will display Disputed or Not Disputed.

```

20 --add column disputed_or_not
21 ALTER TABLE yellevate
22 ADD COLUMN disputed_or_not varchar;
23
24 --update column disputed_or_not to show if disputed or not
25 UPDATE yellevate
26 SET disputed_or_not = (
27 CASE
28     WHEN disputed = 1 THEN 'Disputed'
29     ELSE 'Not Disputed'
30 END
31 );

```

Figure 5: Adding and updating column disputed_or_not

Similar rules apply to the dispute lost column: "1" indicates that Yellevate lost the dispute and that the dispute was resolved in the customer's favor, and the customer is not required to pay the invoice while "0" indicates that the customer did not win the dispute and that they are legally required to pay the full invoice amount; it either indicates that Yellevate won the dispute or that there was no dispute at all.

Because of this, the team added a new column dispute_case which tells if the disputed case is lost or won.

```

33 --add column dispute_case
34 ALTER TABLE yellevate
35 ADD COLUMN dispute_case varchar;
36
37 --update column dispute_case to show if dispute is won or lost
38 UPDATE yellevate
39 SET dispute_case = (
40 CASE
41     WHEN dispute_lost = 0 THEN 'Won'
42     ELSE 'Lost'
43 END
44 );

```

Figure 6: Adding and updating column dispute_case

Another column was added called settlement. This column has been added to distinguish disputes that have been settled on time or settled late.

```

46  --add column settlement
47  ALTER TABLE yellevate
48  ADD COLUMN settlement varchar;
49
50  --update column settlement to show if late or not late
51  UPDATE yellevate
52  SET settlement = (
53  CASE
54      WHEN days_late > 0 THEN 'Past Due'
55      ELSE 'On Time'
56  END
57  );

```

Figure 7: Adding and updating column settlement

Another thing that needs to be checked for is the dates of the original data, the format of the original is yyyy-mm-dd which is a standard way of writing the date, but some customers may get confused between the month and day, as a result, the team decided to convert the month number into text form.

There are three columns with three (3) date formats so we need to create three new columns for each of them; *invoice_date_new*, *due_date_new*, and *settled_date_new*, and update them accordingly.

```

59  --add column invoice_date_new
60  ALTER TABLE yellevate
61  ADD COLUMN invoice_date_new varchar;
62
63  --update column invoice_date_new to show new date format
64  UPDATE yellevate
65  SET invoice_date_new = (
66      TO_CHAR(invoice_date :: DATE, 'yyyy-Month-dd'))
67  );

```

Figure 8: Adding and updating the invoice_date_new column

```

69  --add column due_date_new
70  ALTER TABLE yellevate
71  ADD COLUMN due_date_NEW varchar;
72
73  --update column due_date_new to show new date format
74  UPDATE yellevate
75  SET due_date_new = (
76      TO_CHAR(due_date :: DATE, 'yyyy-Month-dd')
77  );

```

Figure 9: Adding and updating the due_date_new column

```

79 --add column settled_date_new
80 ALTER TABLE yellevate
81 ADD COLUMN settled_date_new varchar;
82
83 --update column settled_date_new to show new date format
84 UPDATE yellevate
85 SET settled_date_new = (
86     TO_CHAR(settled_date :: DATE, 'yyyy-Month-dd')
87 );

```

Figure 10: Adding and updating the settled_date_new

The previous tasks are necessary in cleaning the data; data may contain errors, inconsistencies, misspellings, and others. After all of the previous tasks, a new table needs to be created. In creating the new table the *invoice_date_new*, *due_date_new*, and *settled_date_new* column will change to *invoice_date*, *due_date*, and *settled_date* respectively. For this to accomplish the following code is apply:

```

89 --create table yellevate_invoices
90 CREATE TABLE yellevate_invoices AS (
91     SELECT
92         country,
93         customer_id,
94         invoice_number,
95         invoice_date AS invoice_date_old,
96         REPLACE(invoice_date_new, ' ', '') AS invoice_date,
97         due_date AS due_date_old,
98         REPLACE(due_date_new, ' ', '') AS due_date,
99         invoice_amount,
100         disputed_or_not AS disputed,
101         dispute_case,
102         settled_date AS settled_date_old,
103         REPLACE(settled_date_new, ' ', '') AS settled_date,
104         days_settled,
105         days_late,
106         settlement
107     FROM yellevate
108     ORDER BY invoice_date_old ASC
109 );

```

Figure 11: Creating table yellevate_invoices (Clean Data)

After saving in a the new *yellevate_invoices* table, the team then proceeds to remove the old date formats removing the columns using the following code:

```
111 --remove column invoice_date_old
112 ALTER TABLE yellevate_invoices
113 DROP COLUMN invoice_date_old;
114
115 --remove column due_date_old
116 ALTER TABLE yellevate_invoices
117 DROP COLUMN due_date_old;
118
119 --remove column settled_date_old
120 ALTER TABLE yellevate_invoices
121 DROP COLUMN settled_date_old;
```

Figure 12: Removing extra columns

The team created another table called *yellevate_disputes*. Using the SQL code below, this table will show only the disputed invoices.

```
123 --create table yellevate_disputes to show table with only disputes
124 CREATE TABLE yellevate_disputes AS (
125     SELECT
126         country,
127         customer_id,
128         invoice_number,
129         invoice_date,
130         due_date,
131         invoice_amount,
132         dispute_case,
133         settled_date,
134         days_settled,
135         days_late,
136         settlement
137     FROM yellevate_invoices
138     WHERE disputed ILIKE 'd%'
139 );
```

Figure 13: Creating table yellevate_disputes

ANALYZE

In this phase, the team found the relationship, trends, and patterns that may or can help the team come up with accurate solutions.

Data Analysis (Preparation)

In gathering data, one must always take into account the number of information that can be obtained whether it is required or not is not certain since it can or may help identify the problem, find insights, and recommendations.

The following code is used for determining the number of invoices:

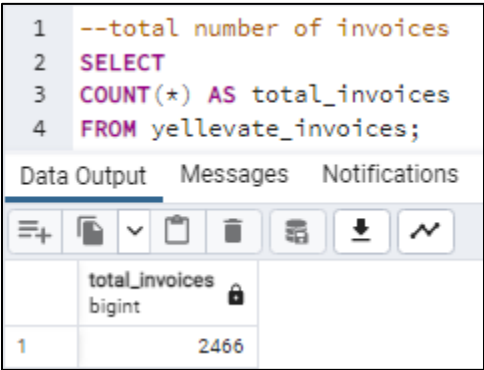


Figure 14: Total number of invoices

The SQL Syntax above has shown that the total number of invoices is 2466.

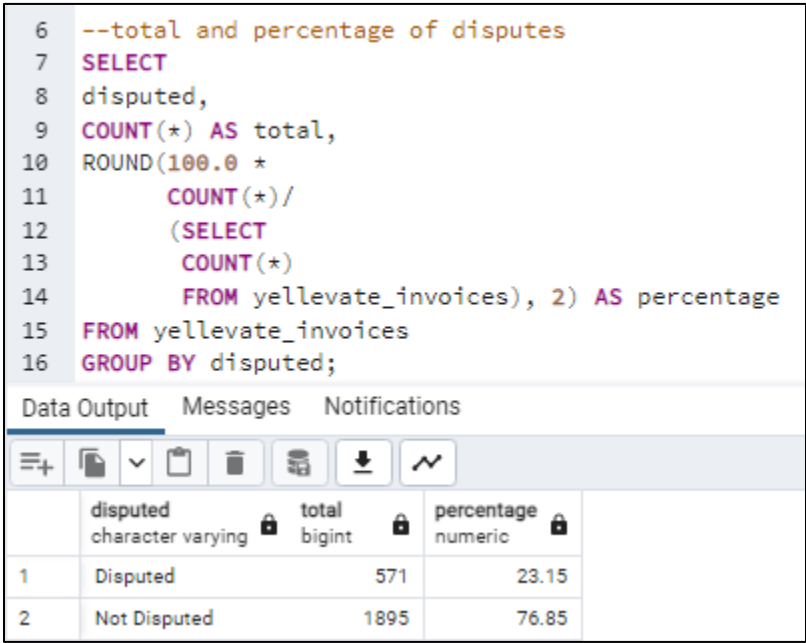


Figure 15: Total and percentage of disputes and not disputed invoices

The code above is able to determine the total number and percentage of disputed and not disputed invoices. In this we learned that 571 out of 2466 invoices are disputes or 23.15% of the 2466 invoices are disputes.

After learning this, the team then proceeds with the next task which is checking if the statistics given is correct. According to Yellevate, 20% of disputes resulted in a payment opt-out which led to a 5% decrease in annual income (USD). To confirm if these statistics are correct the team used the following code:

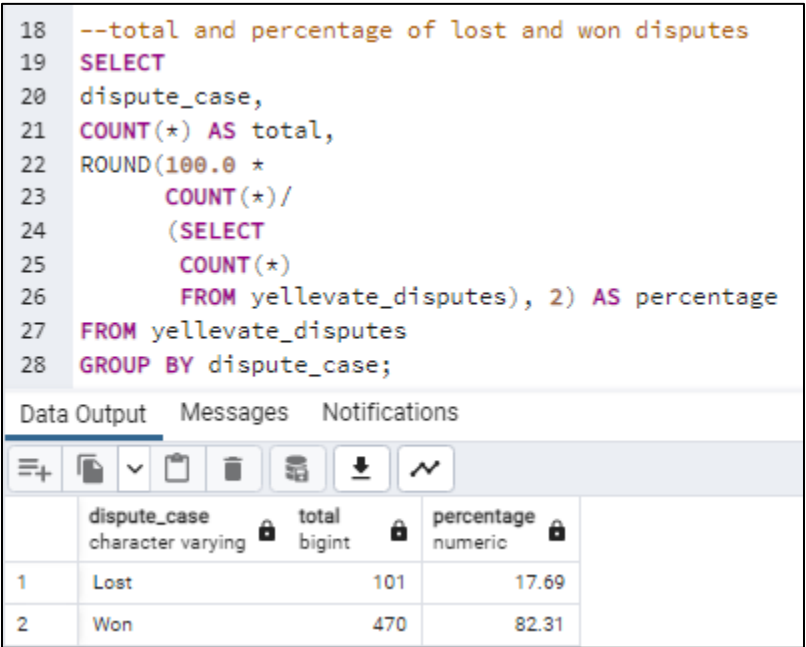


Figure 16: Total and percentage of lost and won disputes

Base on the results above, 101 out of 571 disputed cases are lost or 17.69 % of the 571 disputed cases are lost; take note that once a dispute case is lost, Yellevate lost revenue as well. This means that 17.69 % of disputes resulted in a payment opt-out which is statistically close to the estimation of 20 %.

Data Analysis (Procedure)

After cleaning the data, the team then proceeded with obtaining information about the five (5) goals. Each member of the team is assigned to a different task.

“The processing time in which invoices are settled (average # of days rounded to a whole number)”

For this task, the team needed to find the average processing time (days) for the company to settle invoices overall and the average processing time (days) per country. To find the answers the team used the following code:

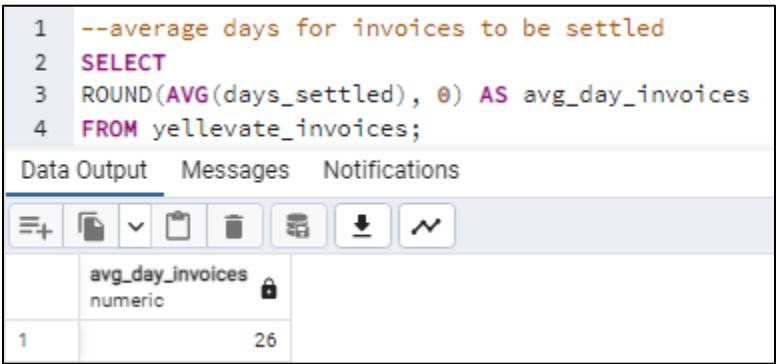


Figure 17: Average days for invoices to be settled

Using the AVG function, the team can see the average number of days while using the ROUND function followed by ‘0’ allows the result to be a whole number:

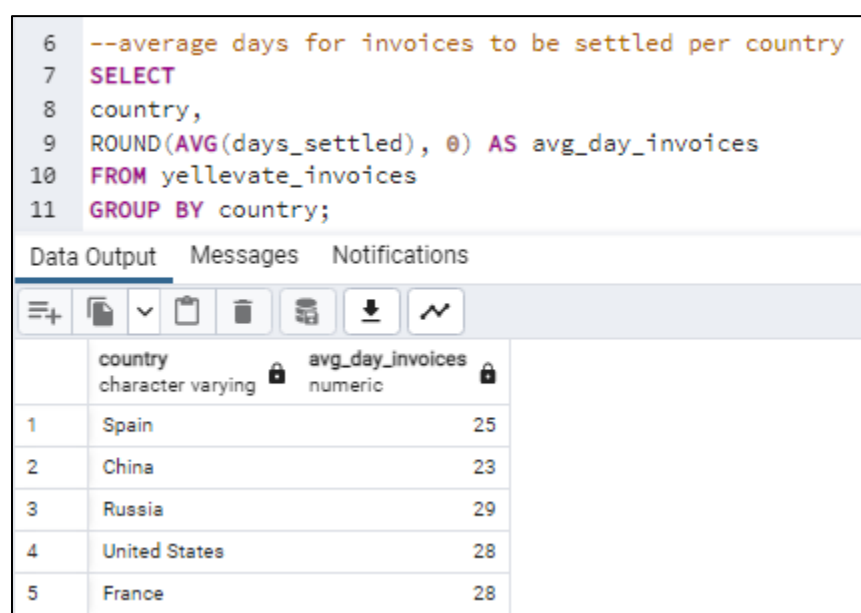


Figure 18: Average days for invoices to be settled per country

For this function, the team used the similar code above but a new function is added, the GROUP BY function. This allows the results to be grouped by the column assigned, in this case, is the country column.

The processing time for the company to settle disputes (average # of days rounded to a whole number)

Similarly, in this task, we need to find two things, the average processing time (days) for the company to settle disputes and the average processing time (days) per country. In order to find the average processing time to settle disputes, the team used the *yellevate_invoices* table and the following code.

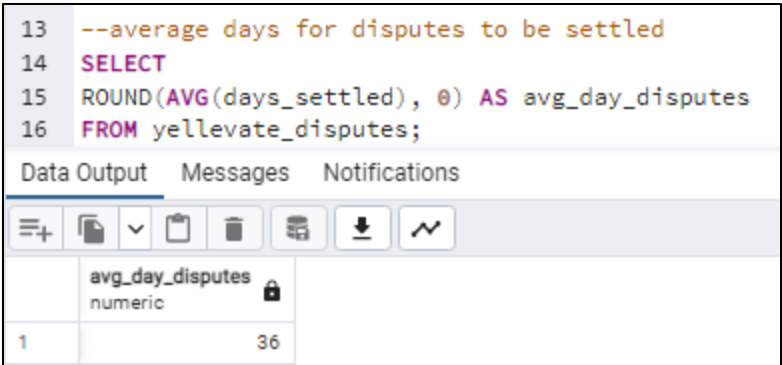


Figure 19: Average days for disputes to be settled

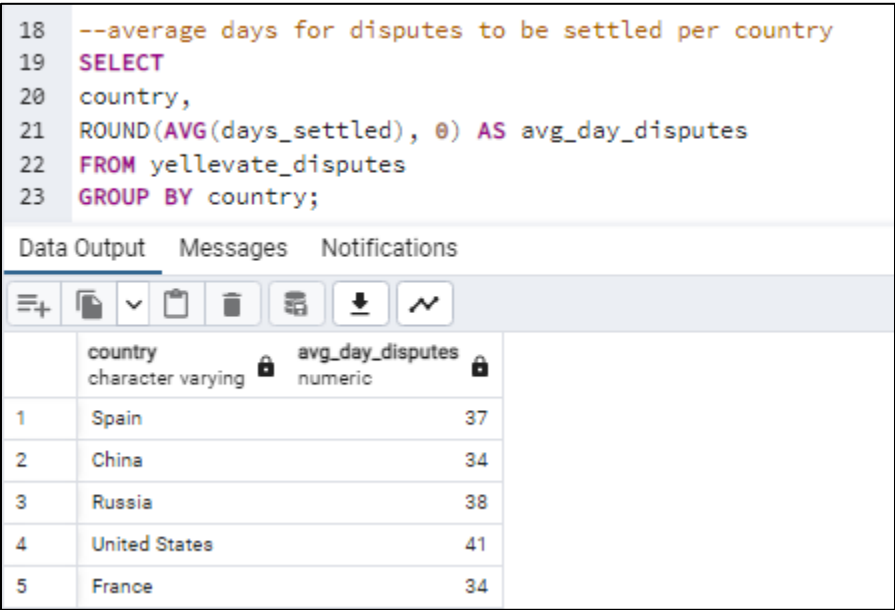


Figure 20: Average days for disputes to be settled per country

Percentage of disputes received by the company that were lost (within two decimal places)

The first two tasks are to get the average processing time (days) but for this and the next task, the team is looking for a percentage, as a result, this will involve decimal places rounded to the nearest hundredths. To obtain the information needed, the team used the following code:

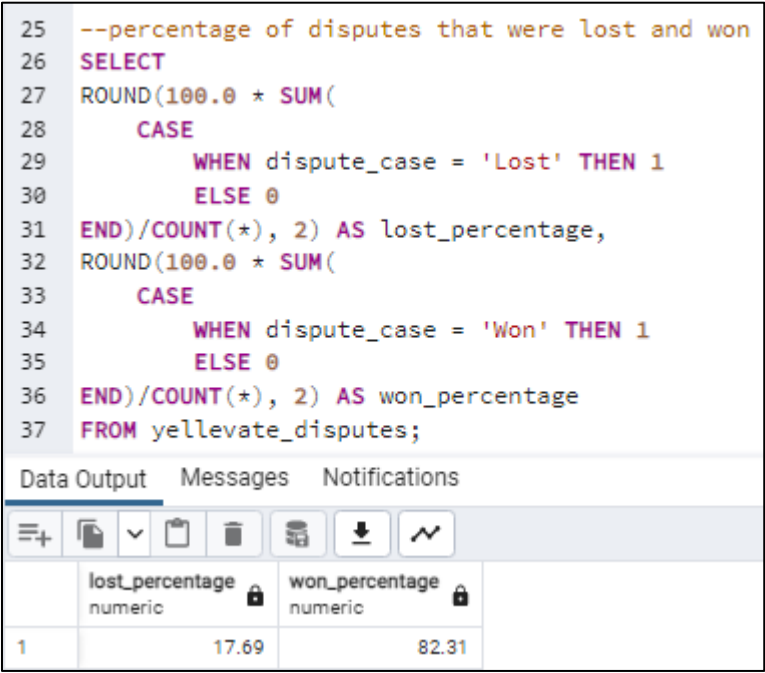


Figure 21: Percentage of disputes that were lost and won

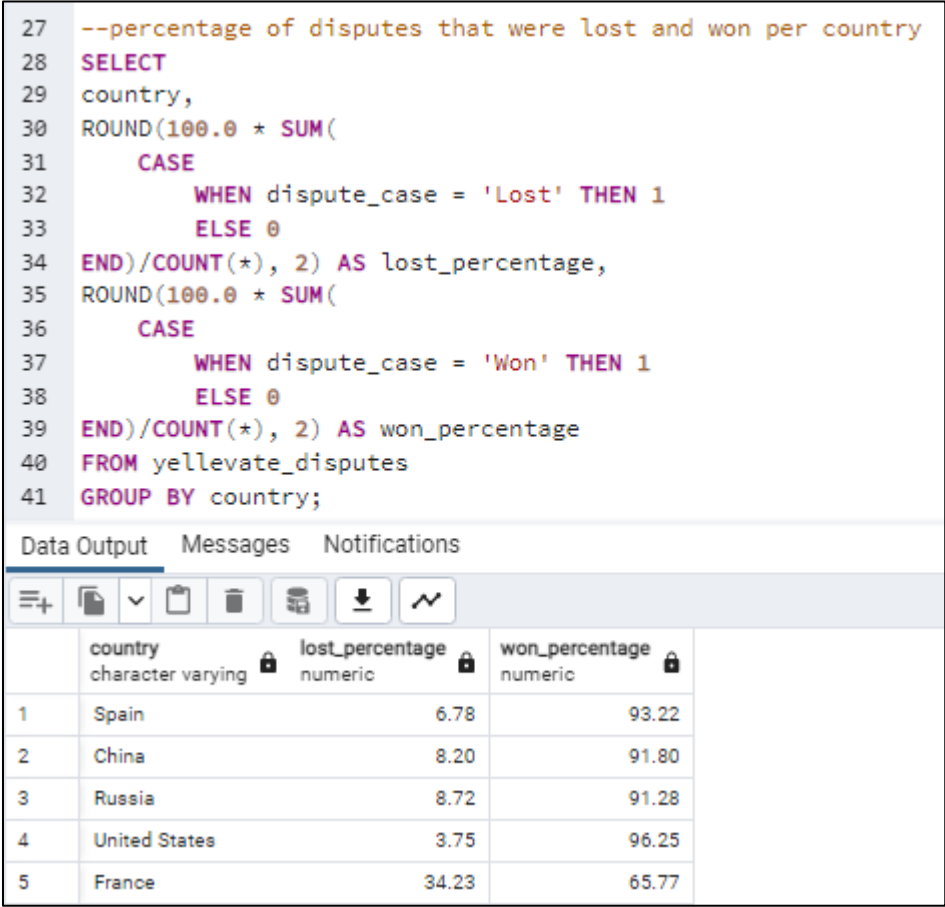


Figure 22: Percentage of disputes that were lost and won per country

Percentage of revenue lost from disputes (within two decimal places)

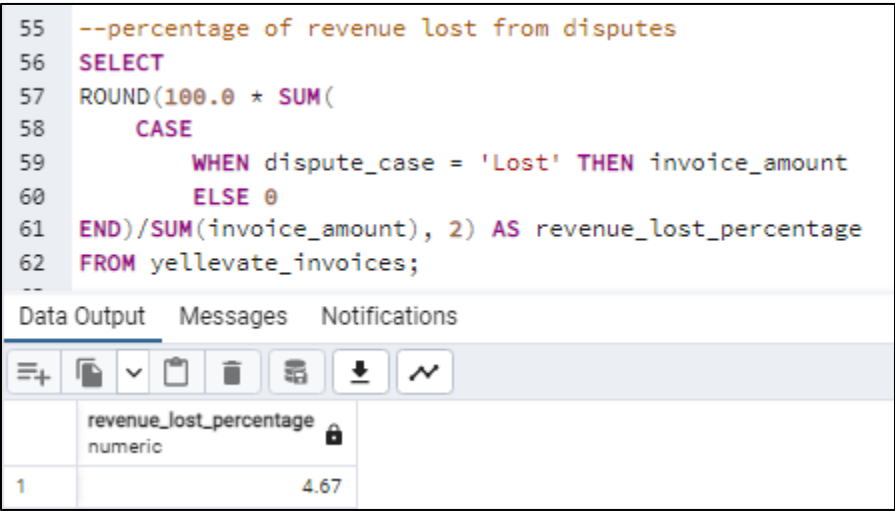


Figure 23: Percentage of revenue lost from disputes

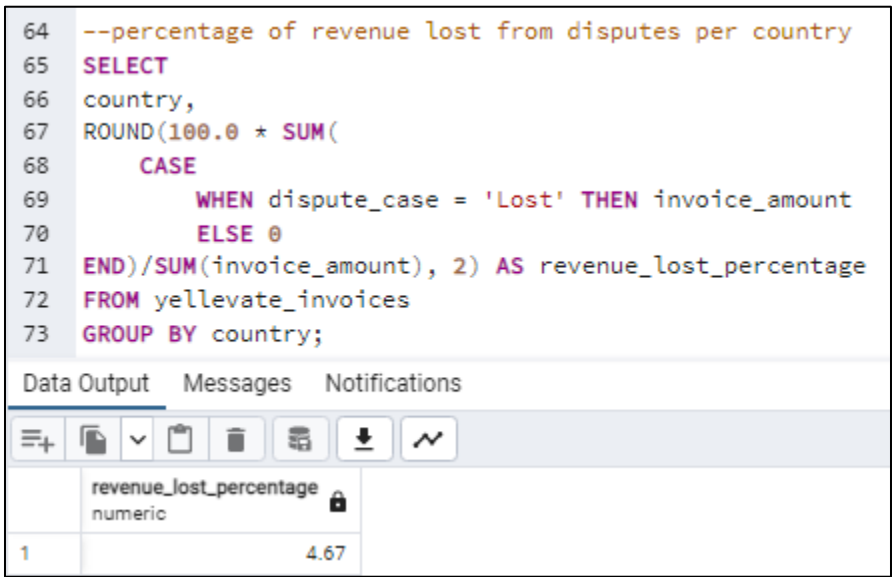


Figure 24: Percentage of revenue lost from disputes per country

The country where the company reached the highest losses from lost disputes (in USD)

In this task, the team needed to find the country with the highest losses of disputes (USD). To accomplish this task, the team decided to do two syntaxes; the total revenue lost per country and total and percentage of revenue losses per country. This allows the team to identify the amount of losses per country but it also helped identify the percentage of losses per country.

```
75 --highest losses from lost disputes per country
76 SELECT
77     country,
78     ROUND(SUM(
79         CASE
80             WHEN dispute_case = 'Lost' THEN invoice_amount
81             ELSE 0
82         END), 2) AS lost_disputes
83 FROM yellevate_invoices
84 GROUP BY country;
```

Data Output

Messages

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	country character varying	lost_disputes numeric
1	Spain	17046.00
2	China	42630.00
3	Russia	81291.00
4	United States	22936.00
5	France	526264.00

Figure 25: Total revenue lost from disputes per country

```

86 --highest losses and percentage of lost per country
87 SELECT
88     country,
89     SUM(CASE
90         WHEN dispute_case = 'Lost' THEN invoice_amount
91         ELSE 0
92     END) AS lost_revenue,
93     ROUND(100.0 * SUM(
94         CASE
95             WHEN dispute_case = 'Lost' THEN invoice_amount
96             ELSE 0
97         END)/SUM(invoice_amount), 2) AS revenue_lost_percentage
98 FROM yellevate_invoices
99 GROUP BY country;

```

Data Output

Messages

Notifications

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	country character varying	lost_revenue numeric	revenue_lost_percentage numeric
1	Spain	17046	1.04
2	China	42630	1.06
3	Russia	81291	3.32
4	United States	22936	0.84
5	France	526264	13.35

Figure 26: Total and percentage of revenue lost from disputes per country

Data Analysis (Additional)

After answering the main goals of the project, the team then proceeds to gather additional information that may or can helped us answer the main problem.

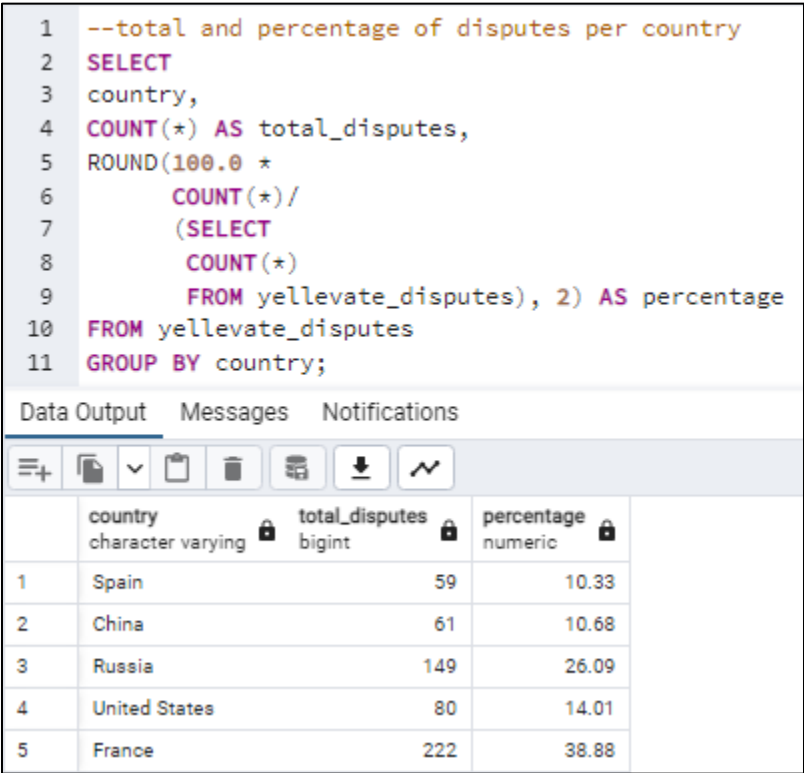


Figure 27: Total and percentage of disputes per country

The SQL Syntax above reveals that France has the most number of disputed cases with 222 disputes in total or 38.88 % out of 571 disputes are from France, followed by Russia, United States, China, and Spain.

After learning the percentage of lost and won disputes on the entire data we can then use the SQL Syntax below to show the total and percentage of lost and won disputes per country.

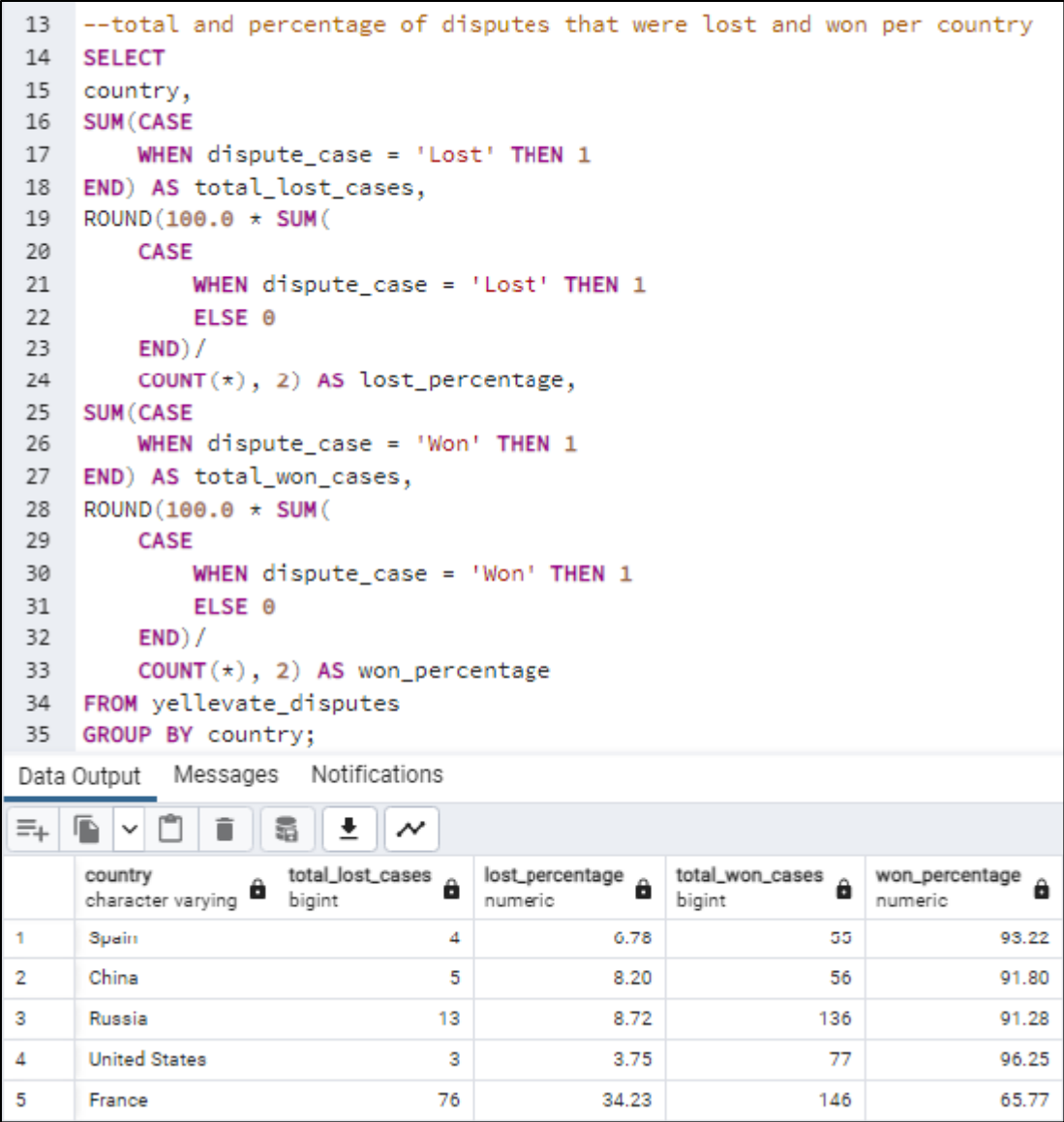


Figure 28: Total and percentage of lost and won disputes per country

Based on the results above, France has the highest number and percentage of lost disputes with 76 out of 222 or 34.23 % of 222 of the total disputes and United States with the lowest number and percentage with 4 out of 59 or 3.75 % of the 59 of the total disputes.

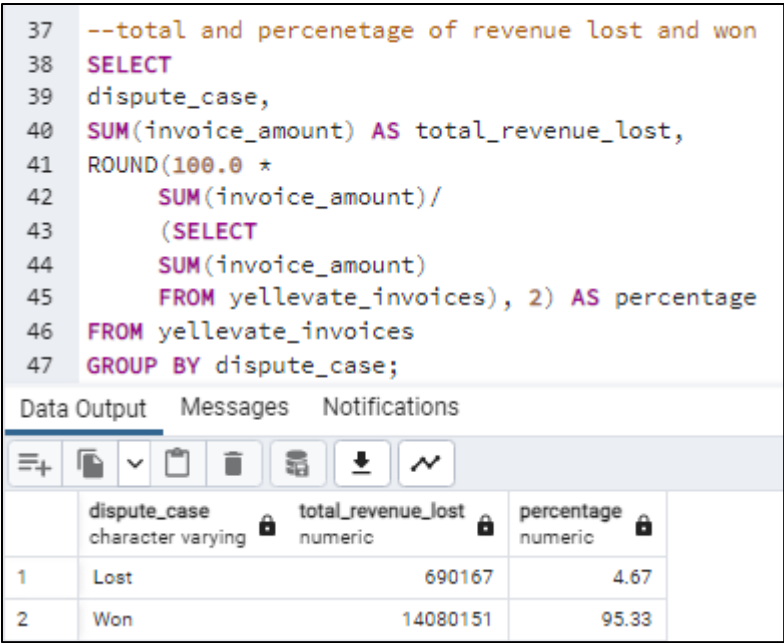


Figure 29: Total and percentage of lost and won revenue

The code above shows that the total revenue lost is \$690,167.00 or 4.67 %. This percentage is also close to the estimation that Yellevate has decreased the annual revenue by 5%. Base on the important data gathered above it is revealed that 17.69 percent of the total invoices resulted in payment opt-out lead to a 4.67 % decrease in the annual revenue.

Another thing to learn is the total number of invoices that settled on time or past due. To find the answer, the following code is applied:

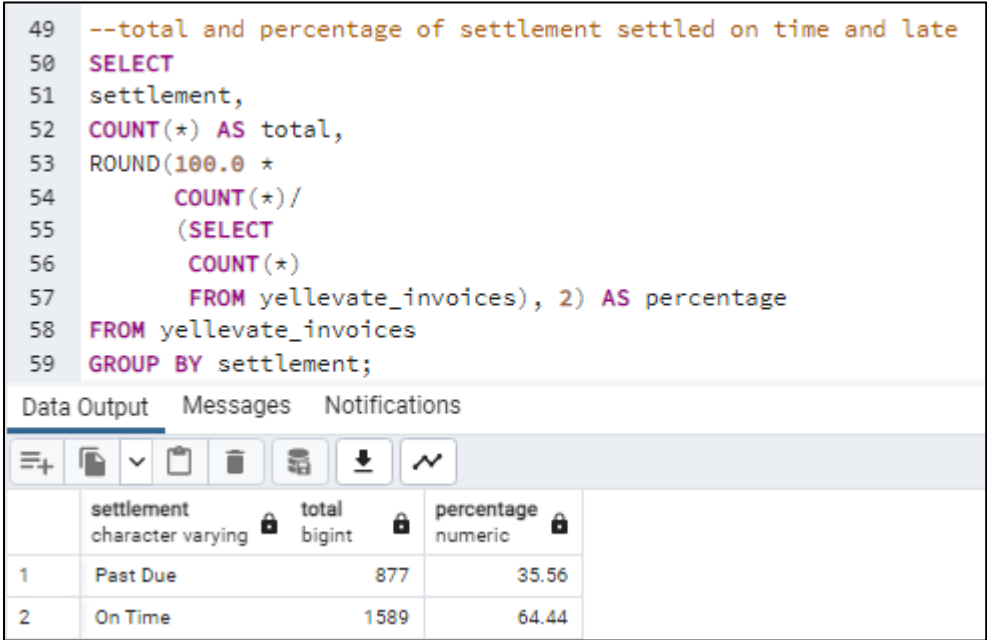
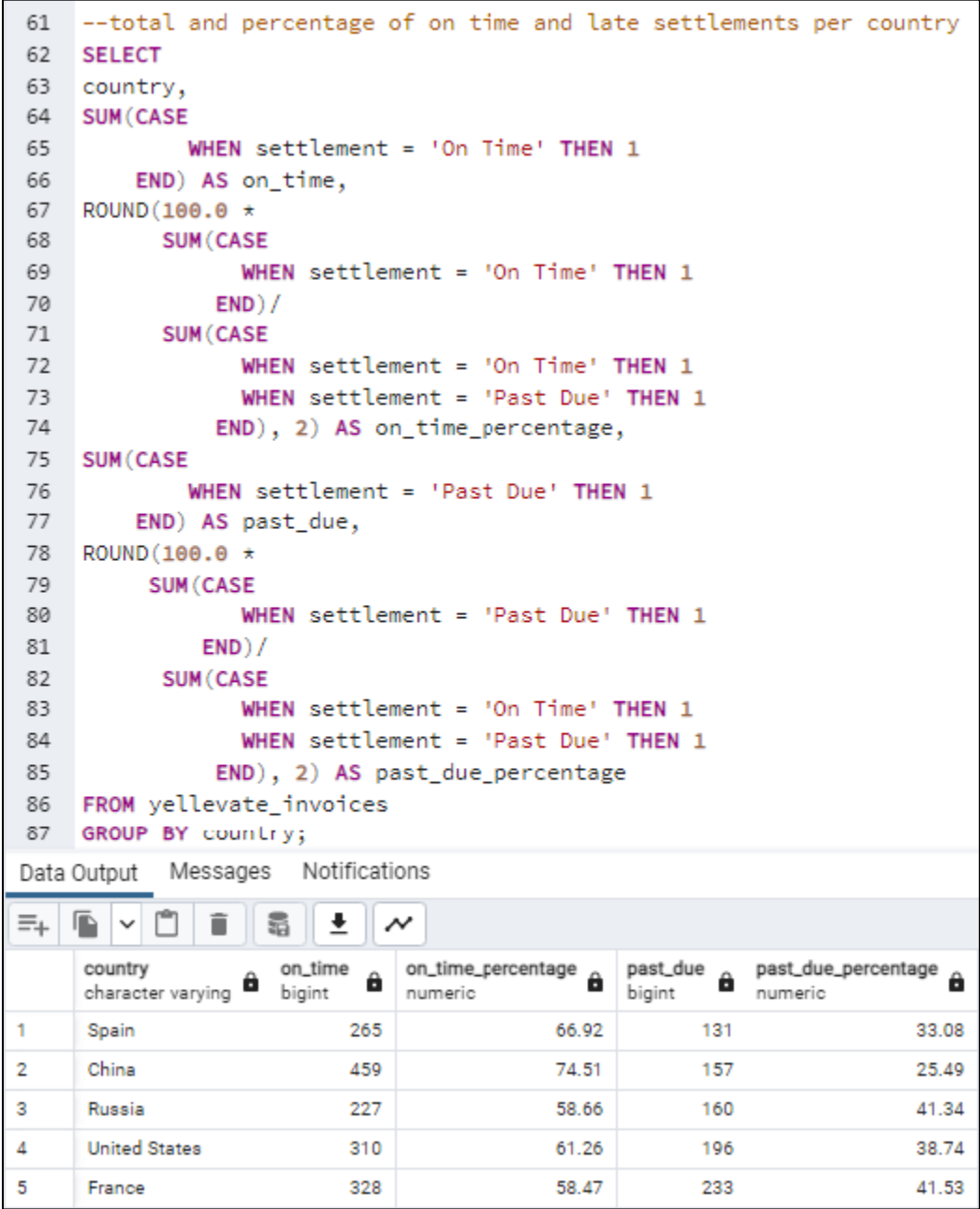


Figure 30: Total and percentage of on time and late settlements

The results above show that 877 out of 2466 invoices or 35.56 percent of the 2466 invoices are settled late or past due.



After learning the total and percentage of disputes, lost and won disputes, and late and on time settlements per country, the next task the team did was focused on the *customer_id* column.

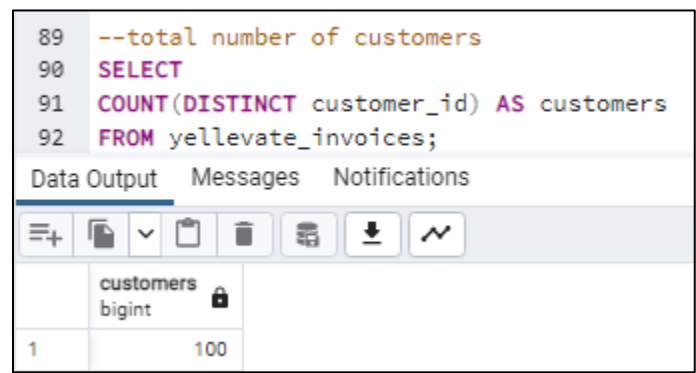


Figure 32: Total number of customers

Using the `DISTINCT` function on the *customer_id* column will show the unique *customer_id*, using the `COUNT` function on this will result in the total number of customers, which is only 100. This means that 100 customers contributed to the entire dataset of 2466 invoices.

After figuring this out, the team then proceeds with figuring out the total number customers with disputed cases against Yellevate. This can be obtained using the following code:

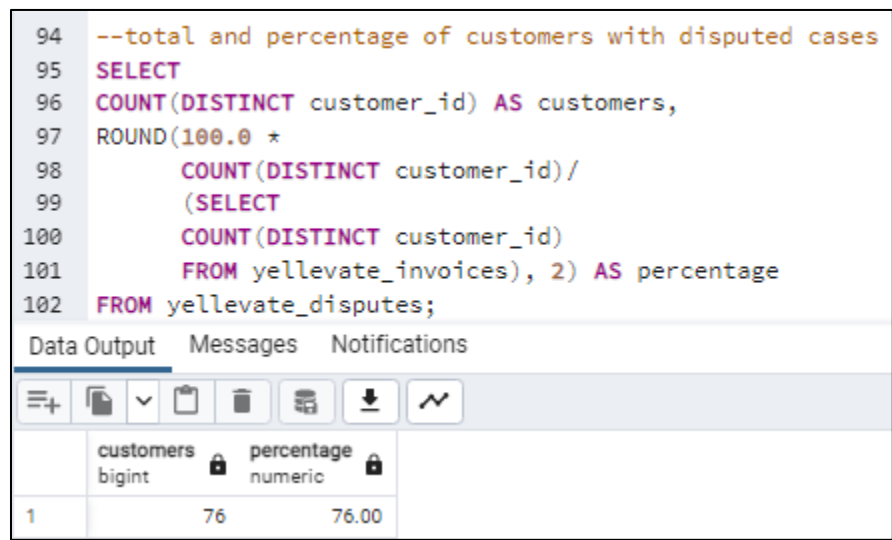


Figure 33: Total and percentage of customers with disputed cases

The SQL Syntax above shows that 76 or 76 % of the 100 customers have disputed cases while the rest only had invoices. After learning this, the team then needs to know how many of the 76 customers have won cases. This can be answered using the following code:

```

104 --total and percentage of customers who have won cases
105 SELECT
106 COUNT(DISTINCT customer_id) AS customers,
107 ROUND(100.0 *
108     COUNT(DISTINCT customer_id)/
109     (SELECT
110         COUNT(DISTINCT customer_id)
111         FROM yellevate_disputes), 2) AS percentage
112 FROM yellevate_disputes
113 WHERE dispute_case = 'Lost';

```

Data Output
Messages
Notifications

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	customers bigint	percentage numeric
1	34	44.74

Figure 34: Total and percentage of customers who have won cases

Using the code above will show that 34 or 44.74 % of the 76 customers with disputed cases have won cases. Finally, the last thing the team needs to know the total number of won cases of the each country per customer id.

```

115 --lost cases in each country per customer_id
116 SELECT
117 customer_id,
118 SUM(CASE
119     WHEN country = 'China' AND dispute_case = 'Lost' THEN 1
120     ELSE 0
121 END) AS china,
122 SUM(CASE
123     WHEN country = 'France' AND dispute_case = 'Lost' THEN 1
124     ELSE 0
125 END) AS france,
126 SUM(CASE
127     WHEN country = 'Russia' AND dispute_case = 'Lost' THEN 1
128     ELSE 0
129 END) AS russia,
130 SUM(CASE
131     WHEN country = 'Spain' AND dispute_case = 'Lost' THEN 1
132     ELSE 0
133 END) AS spain,
134 SUM(CASE
135     WHEN country = 'United States' AND dispute_case = 'Lost' THEN 1
136     ELSE 0
137 END) AS united_states
138 FROM yellevate_disputes
139 WHERE dispute_case = 'Lost'
140 GROUP BY customer_id
141 ORDER BY customer_id ASC;

```

Figure 35: Lost cases in each country per customer_id (code)

	customer_id character varying	china bigint	france bigint	ruusia bigint	spain bigint	united_states bigint
1	0379-NEVHP	1	0	0	0	0
2	0709-LZRJV	1	0	0	0	0
3	0783-PEPYR	0	1	0	0	0
4	1080-NDGAE	2	0	0	0	0
5	1408-OQZUE	0	0	0	1	0
6	1447-YZKCL	0	1	0	0	0
7	2026-XLBER	0	0	0	0	1
8	3448-OWJOT	0	12	0	0	0
9	3568-JJMFV	0	0	1	0	0
10	3569-VJWXS	1	0	0	0	0
11	4092-ZAVRG	0	3	0	0	0
12	4632-QZOKX	0	8	0	0	0
13	4640-FGEJI	0	5	0	0	0
14	5148-SYKLB	0	0	2	0	0
15	5164-VMYWJ	0	2	0	0	0
16	5284-DJOZO	0	2	0	0	0
17	5573-KSOIA	0	2	0	0	0
18	5613-UHVMG	0	0	4	0	0
19	5924-UOPGH	0	0	1	0	0
20	6048-QPZCF	0	2	0	0	0
21	6177-VTITE	0	0	0	1	0
22	6296-UKEUZ	0	0	0	1	0
23	6627-ELFBK	0	0	2	0	0
24	6833-ETVHD	0	1	0	0	0
25	7228-LEPPM	0	0	0	0	1
26	7600-OISKG	0	8	0	0	0
27	7758-WKLVM	0	0	0	0	1
28	8102-ABPKQ	0	0	1	0	0
29	8389-TCXFQ	0	6	0	0	0
30	8887-NCUZO	0	0	2	0	0
31	9117-LYRCE	0	4	0	0	0
32	9725-EZTEJ	0	11	0	0	0
33	9771-QLGZ	0	8	0	0	0
34	9883-SDWFS	0	0	0	1	0

Figure 36: Lost cases in each country per customer_id (result)

The figure above showed that out of 34 customers have multiple winning disputed cases. This is a very interesting finding considering that one customer from France has won 12 times against Yellevate.

SHARE

This is the phase where the team starts to share their findings and this is also the phase that utilizes data visualization, in this case, the team used Microsoft Excel.

Findings

Russia has the longest days to processing time to settle invoices, with 29 days, which is 26.09 % longer than China, which has the shortest processing time of 23 days. Additionally, the average processing time (days) for the company to settle invoices is 26 days.

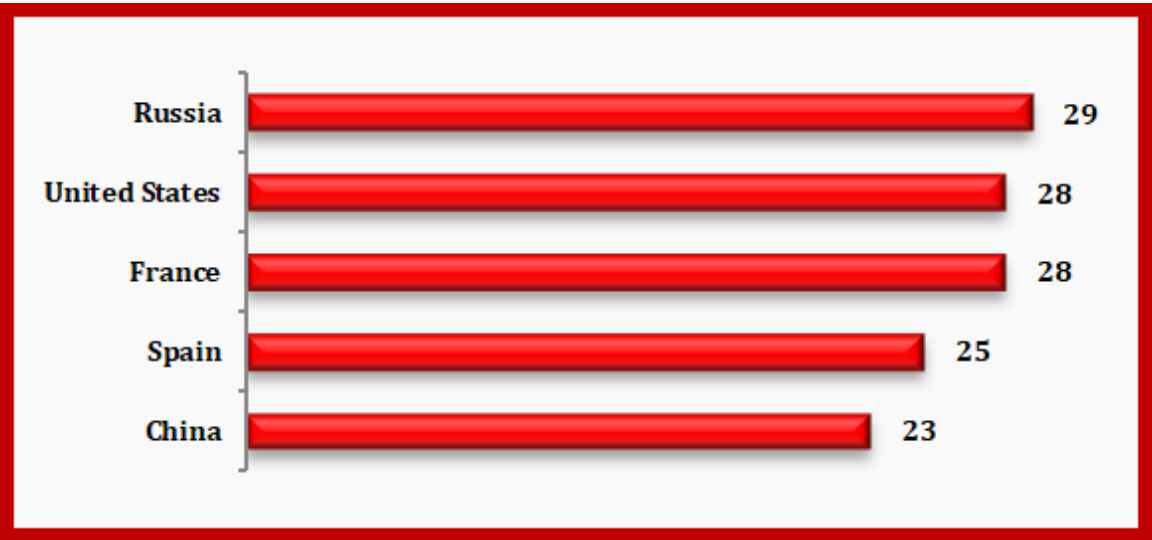


Figure 37: Average Processing Time to Settle Invoices per Country

The United States has the longest days or processing time to settle disputes, with 41 days, which is 25.59 % longer than China and France, which has the shortest processing time of 34 days. Additionally, the average processing time (days) to settle disputes is 36 days.



Figure 38: Average Processing Time to Settle Disputes

With 17.60 % being the average, France has the highest percentage of lost disputes with 34.23 %, which is more than 8 times higher than the United States, which has the lowest percentage of lost with 3.75 %.

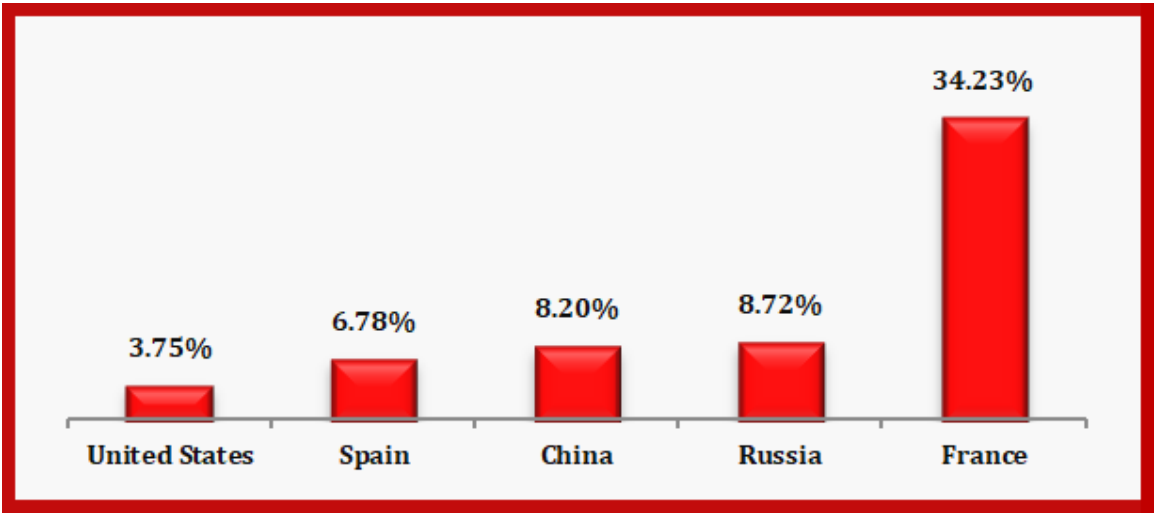


Figure 39: Percentage of Disputes that were Lost per Country

With an average of 4.67 %, France has the highest percentage of revenue lost with 13.35 %, which is almost 15 times higher than the United States, which has the lowest percentage of lost with 0.84%.

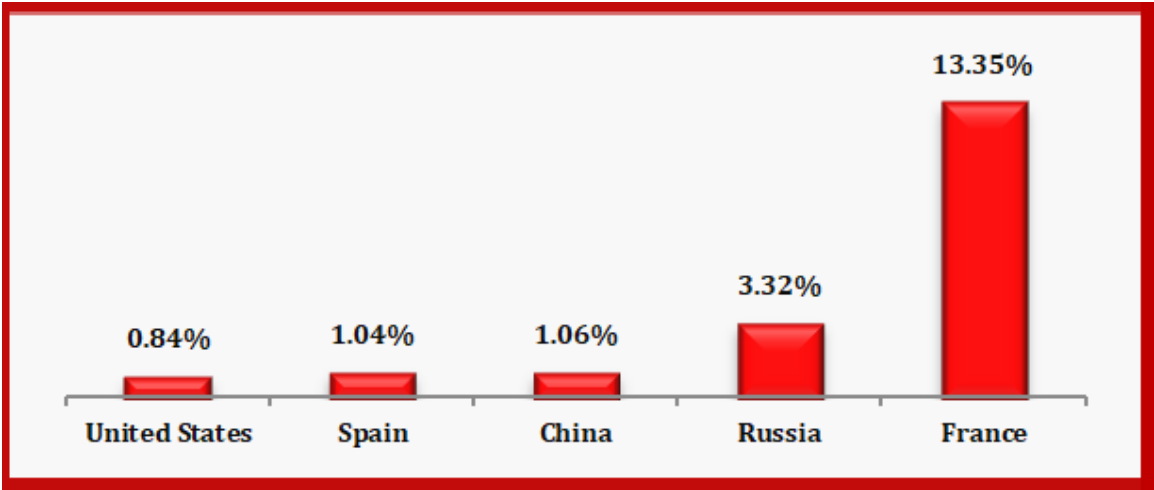


Figure 40: Percentage of Revenue that was Lost per Country

Since France has the highest rate of lost disputes, the country with the biggest losses from lost disputes should be France.

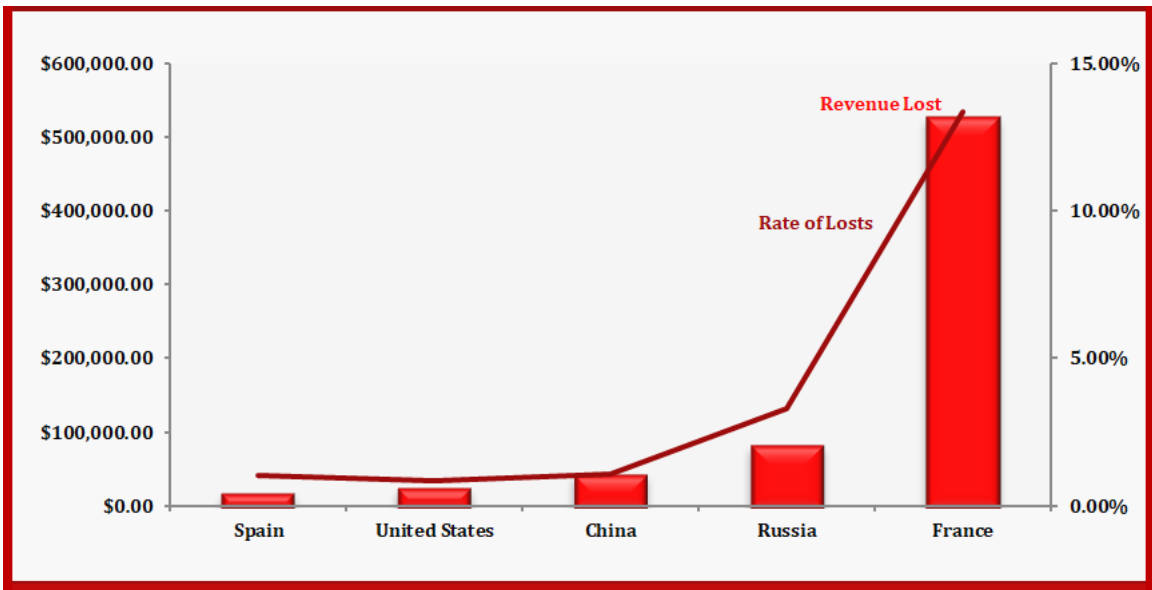


Figure 41: Total and Percentage of Revenue Lost per Country

Insights

- **Covid-19 Pandemic**
 - The data gathered showed that the first disputed invoice was around February 2020, which was also the time the Covid Pandemic takes place.
 - Due to the pandemic, a lockdown was implemented, which resulted in some companies, possibly also Yellevate, becoming affected.
 - If Yellevate is affected by the pandemic, it is safe to assume that the services of Yellevate are also affected which can result in services that may be unfavorable to some clients or customers.
 - To some, the Covid Pandemic is considered a natural disaster or calamity, which means that customers might assume or expect an exemption in their contract but was not granted.
 - Another contributing factor to the documentation and communication between Yellevate and their customers is the adjustment of employees for their work-from-home set-up also affects.
- **Late Settlements**
 - Because of the possibly poor documentation and communication between Yellevate and their customers, According to Figure 30, 877 out of 2466, or 35.56 % of the total invoices are settled late or past due.
 - Additionally the country with the most revenue losses is France and according to Figure 31, it is also the country with the most disputes that are settled late.
- **Customer Issues**
 - Another contributing factor that cost the problem was the customers. Figure 36 showed that multiple customers have been winning multiple disputed cases.
 - Either this customer is just very loyal to Yellevate despite being unsatisfied with its services multiple times or this customer found a loop hole in the contract and it is just abusing the system.

Recommendations

- Improve the processing time of settling disputes by keeping constant communication between the company and its customers, especially if one party requests to renegotiate the contract.
- The company may also conduct more thorough background checks and screening of their clients before signing a contract, especially customers with a history of a dispute which was lost by the company.
- The company may also review the history of cases, on how the company lost them by keeping an open communication to avoid losing the same dispute and by analyzing and improving the parts of the agreement that the customers based their disputes on.
- To avoid or minimize revenue loss, discuss with the customers and offer them incentives like discounts on future service requests for them to consider not opting out of their payment.

APPENDICES

APPENDIX A. GROUP WORKSPACE

Group Workspace

Deadline

Date of submission: 16 February 2023.

Tasks

Week #1

- 1. Conduct a first team meeting and discuss the availability of each member.
- 2. The processing time in which invoices are settled.
- 3. The processing time for the company to settle disputes.
- 4. Percentage of disputes received by the company that were lost.
- 5. Percentage of Revenue lost from disputes.
- 6. The country where the company reached the highest losses from lost disputes.
- 7. Clean the data.
- 8. Making PDF.
- 9. Making PowerPoint Presentations.
- 10. Making a script for the video presentation.

Week #2

- 1. Making The Video Presentation.
- 2. Editing The Video Presentation.
- 3. Send 2x2 picture for the video presentation
- 4. Finalizing Group Workspace
- 5. Evaluating Group Members

Plan

Task	Who is responsible	Deadline	Status
Conduct a first team meeting and discuss the availability of each member. Identify the problems facing the business and come up with objectives that can solve them with data analysis	Armecin, Jan Riel T. — Group Lead	02/02/2023	Completed
The processing time in which invoices are	De La Paz, Archie Neil	02/04/2023	Completed

Task	Who is responsible	Deadline	Status
settled.			
The processing time for the company to settle disputes.	Felizardo, Mary Rose	02/04/2023	Completed
Percentage of disputes received by the company that were lost.	Lacson, Vivencio	02/04/2023	Completed
Percentage of Revenue lost from disputes.	Lazaro, Azeneth	02/04/2023	Completed
The country where the company reached the highest losses from lost disputes.	Armecin, Jan Riel T. — Group Lead	02/04/2023	Completed
Clean the data	Abaleta, Oliver C.	02/04/2023	Completed
Making PDF report	Abaleta, Oliver C.	02/05/2023	Completed
Making PowerPoint Presentations	Felizardo, Mary Rose	02/07/2023	Completed
Making a script for the video presentation	De La Paz, Archie Neil	02/07/2023	Completed
Finalize Script for the video presentation	De La Paz, Archie Neil Azeneth, Lazaro	02/09/2023	Completed
Making The Video Presentation	Lacson, Vivencio De La Paz, Archie Neil Azeneth, Lazaro	02/12/2023	Completed
Editing The Video Presentation	Lazaro, Azeneth	02/14/2023	Completed
Send 2x2 picture for the video presentation	Armecin, Jan Riel T. Abaleta, Oliver C. De La Paz, Archie Neil Felizardo, Mary Rose Lacson, Vivencio Lazaro, Azeneth	02/14/2023	Completed
Finalize Group Workspace	Armecin, Jan Riel T. Abaleta, Oliver C.	02/15/2023	Completed

Task	Who is responsible	Deadline	Status
Evaluate Group Members	Armecin, Jan Riel T. Abaleta, Oliver C. De La Paz, Archie Neil Felizardo, Mary Rose Lacson, Vivencio Lazaro, Azeneth	02/15/2023	Completed

Meeting #1

Date: 02/02/2023

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lacson, Vivencio

What we discussed:

- Conduct a first team meeting and discuss the availability of each member.
- Discuss Group Workspace (Distribution of Task)
- Identify the problems facing the business
- Come up with objectives or an action plan that can solve them with data analysis.

Next steps: Set data analysis and Discuss the answers at the next meeting.

Meeting #2

Date: 02/04/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
Felizardo, Mary Rose
Lacson, Vivencio
Lazaro, Azeneth

What we discussed:

- Discuss the answer for the distributed tasks per member.
- Make a Dashboard for each members' answers.

Next steps:

- Make PowerPoint Presentation
- Finalize Answers

Meeting #3

Date: 02/06/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lacson, Vivencio
Lazaro, Azeneth

What we discussed:

- Finalize the PDF Document
- Making PowerPoint Presentation

Next steps:

- Finalizing PowerPoint Presentation
- Making Video
- Editing Video

Meeting #4

Date: 02/07/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lazaro, Azeneth

What we discussed:

- Finalizing PowerPoint Presentation
- Finalizing Script for Video Presentation
- Adding/Paraphrasing Insights and Recommendations
- Dry run with the final script for the video
- Set-up for the video presentation

Next steps:

- Finalizing Script for Video Presentation

Meeting #5

Date: 02/09/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lacson, Vivencio
Lazaro, Azeneth

What we discussed:

- Finalizing Script for Video Presentation
- Dry run script in Movavi Video Editor
- Paraphrasing Recommendations

Next steps:

- Making Video
- Editing Video

Meeting #6

Date: 02/13/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lacson, Vivencio
Lazaro, Azeneth

What we discussed:

- Finalizing the Project

Next steps:

- Submission of Project
- Evaluating group members

Meeting #7

Date: 02/15/2023.

Who attended the meeting:

Group Lead: Armecin, Jan Riel T.

Members: Abaleta, Oliver C.
De La Paz, Archie Neil
Felizardo, Mary Rose
Lacson, Vivencio
Lazaro, Azeneth

What we discussed:

- Submission of Project
- Evaluating group members

APPENDIX B. ADDITIONAL GRAPHS

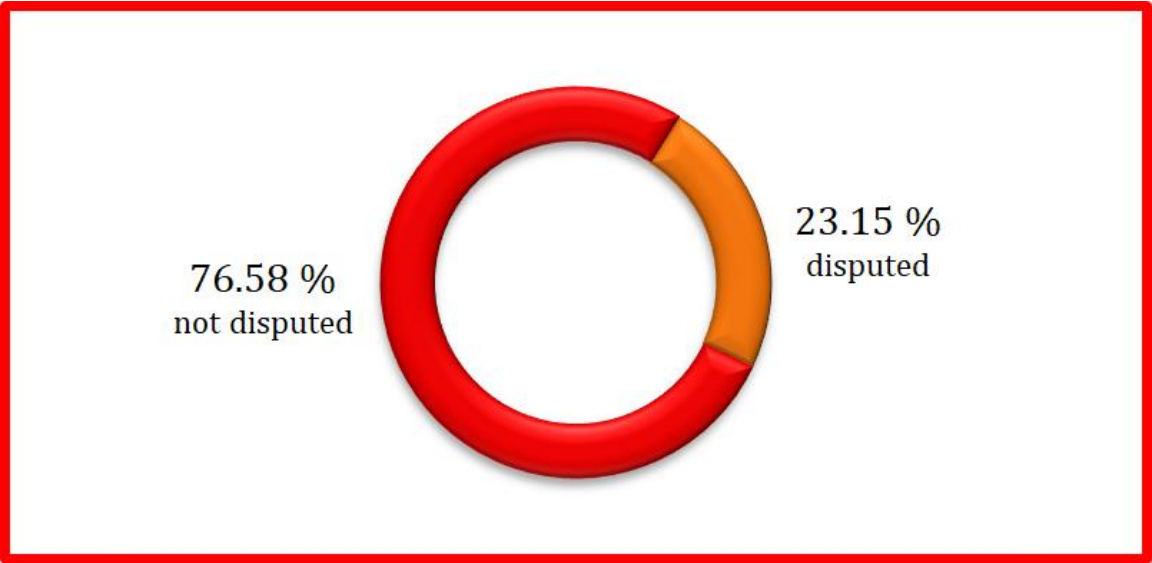


Figure 42: Percentage of Non and Disputed Invoices (Graph)

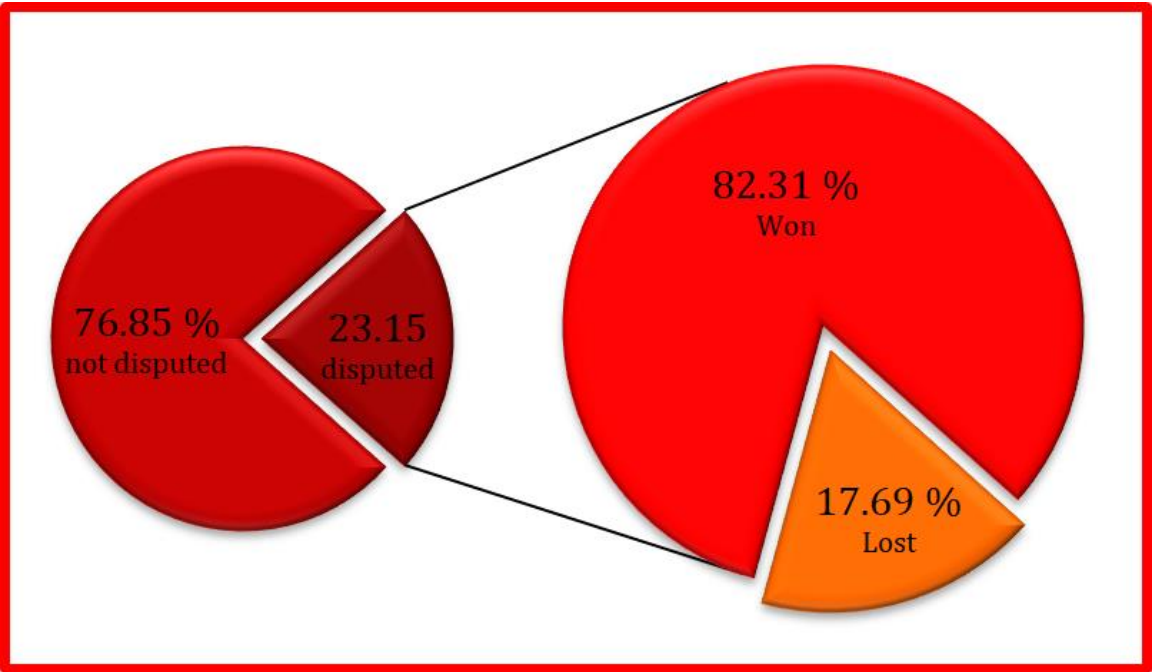


Figure 43: Percentage of Lost and Won Disputes (Graph)

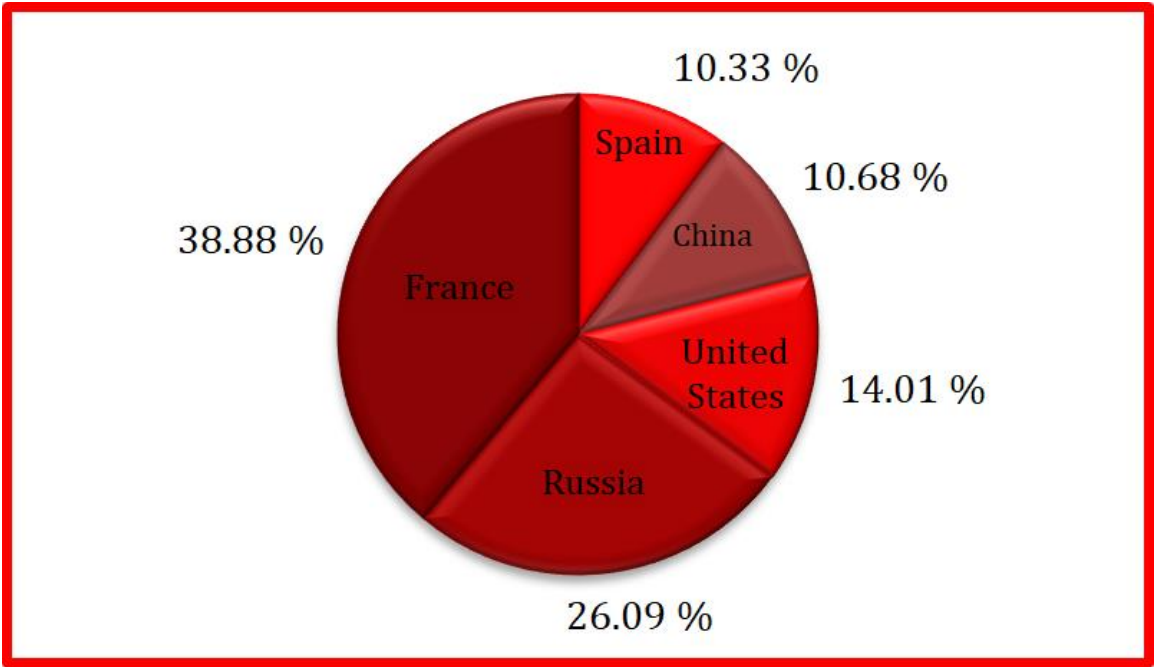


Figure 44: Percentage of Disputes per Country (Graph)

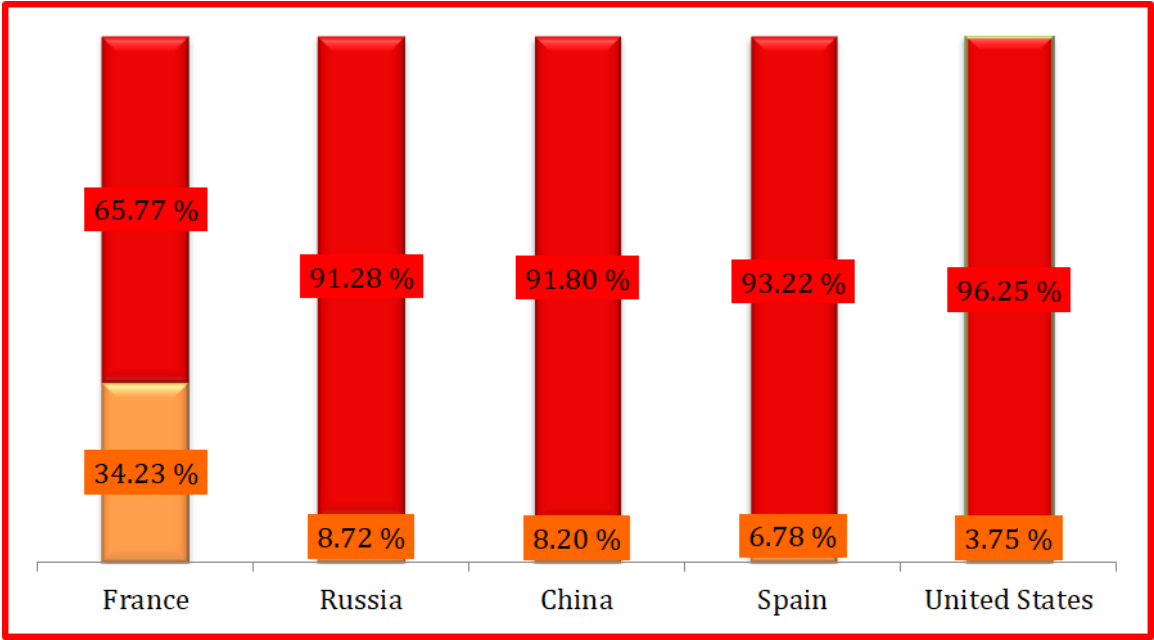


Figure 45: Percentage of Disputes per Country (Graph)

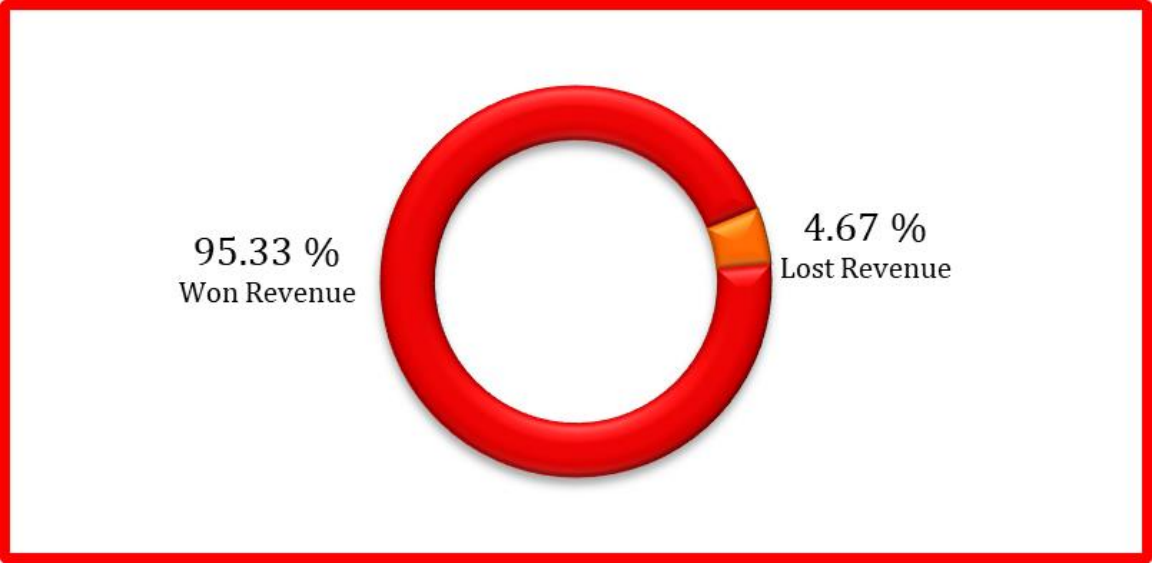


Figure 46: Percentage of Lost and Won Revenue (Graph)

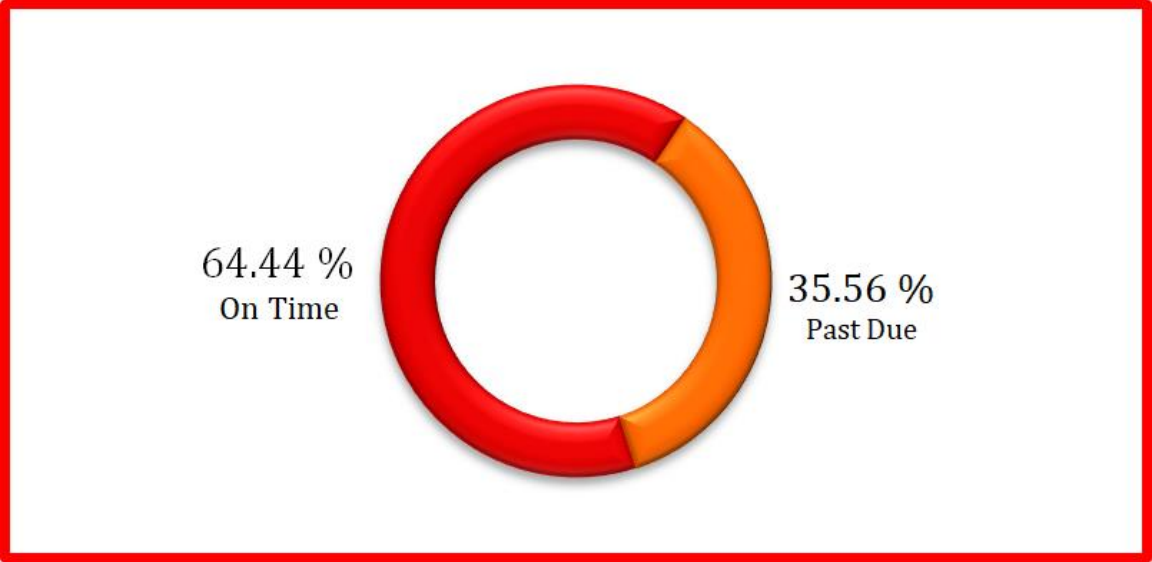


Figure 47: Percentag of On Time and Past Due Settlements (Graph)

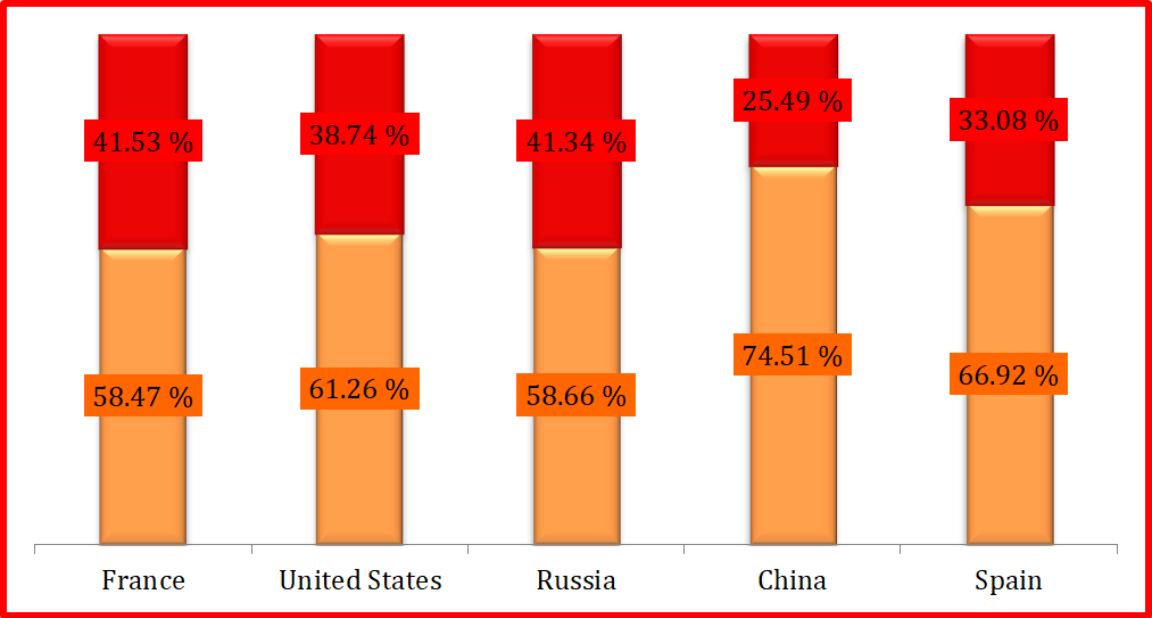


Figure 48: Percentage of On Time and Late Settlements Per Country (Graph)

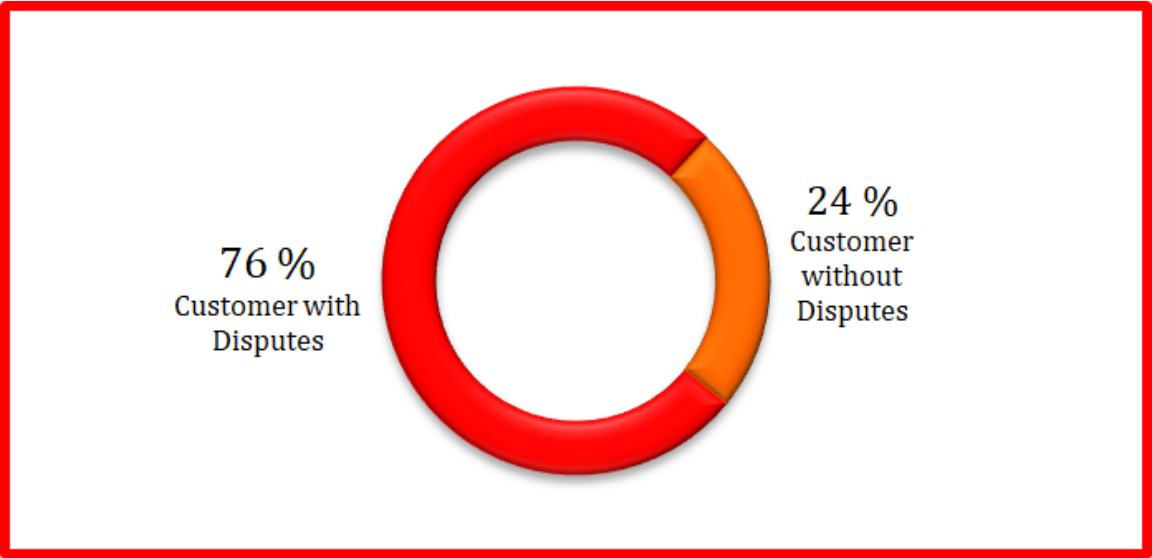


Figure 49: 13 Percentage of Customers With and Without Disputes (Graph)

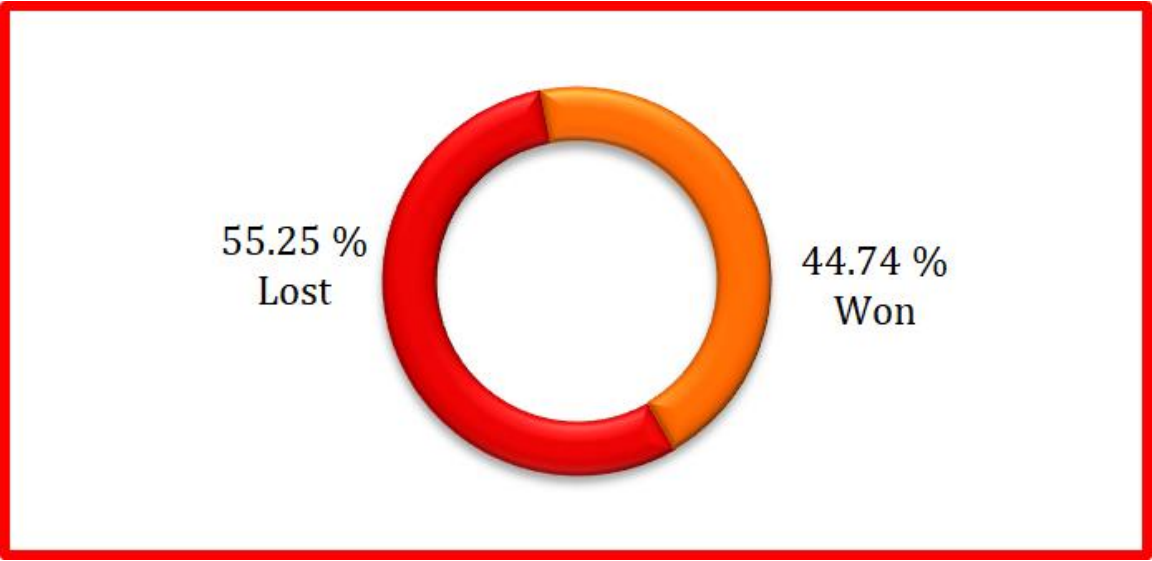


Figure 50: Percentage of Customers That Lost and Won Disputes (Graph)