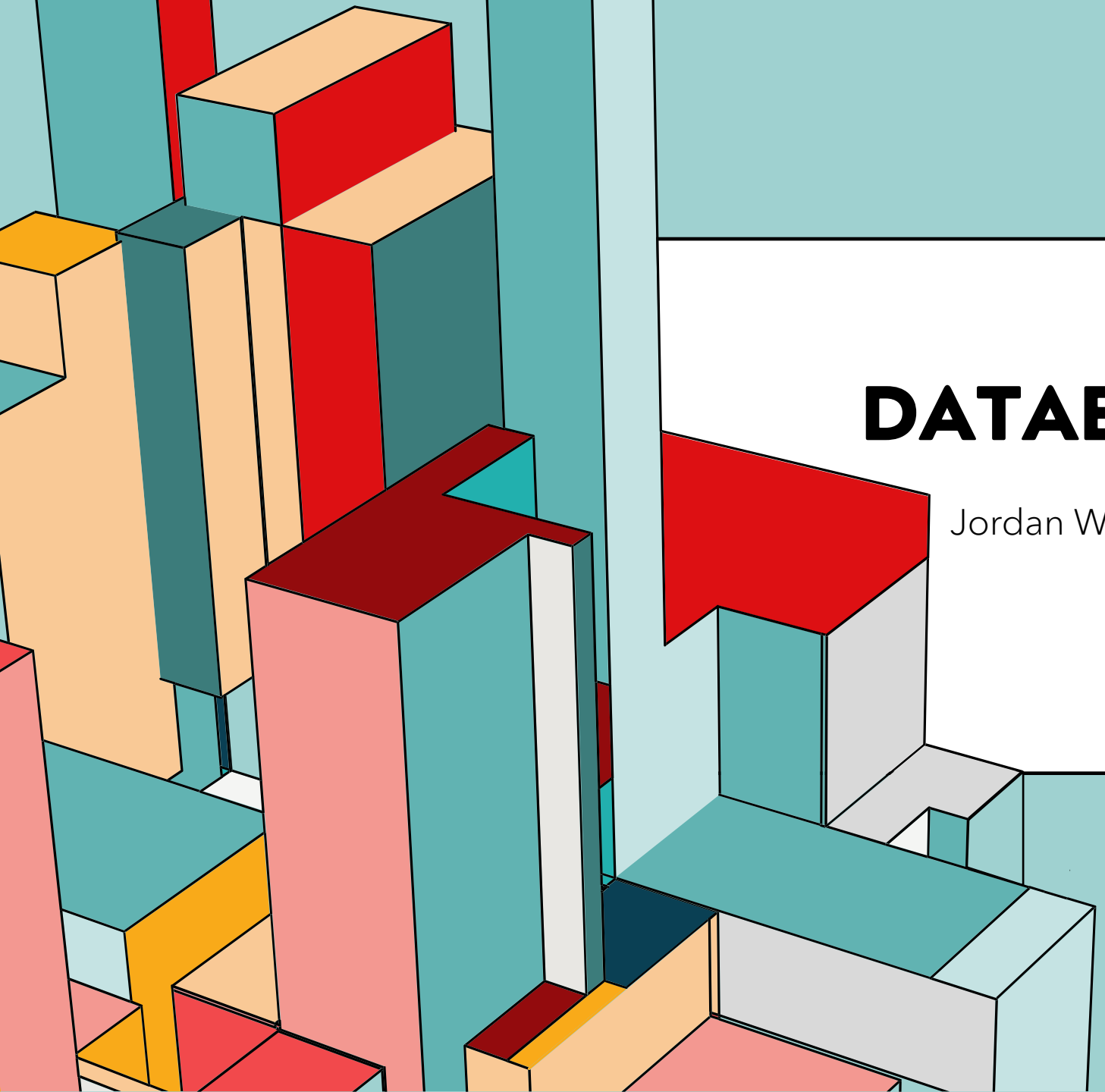


DATABASE PROJECT

Jordan Wells

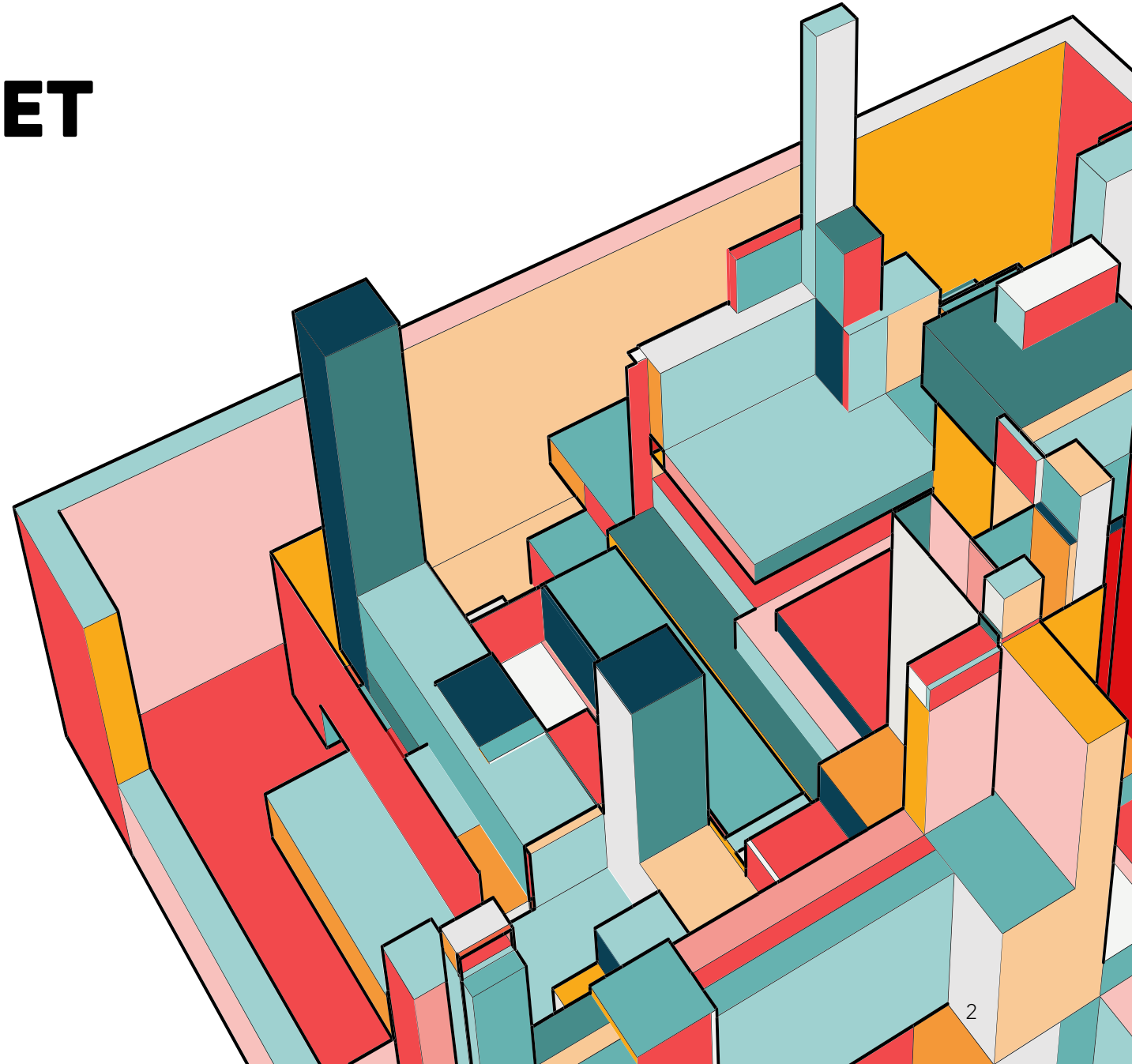
ABOUT THE DATASET

Credit Card Customers

This dataset is composed of bank customer credit card data, used to conduct churn analysis.

- To predict which customers are most-likely to leave the bank

- Gives the bank a better idea of how to serve their customers



MY SOLUTION

Step 1

Strategize the layout of data into 3rd NF.

Step 2

Create the necessary tables and populate data into the tables.

Step 3

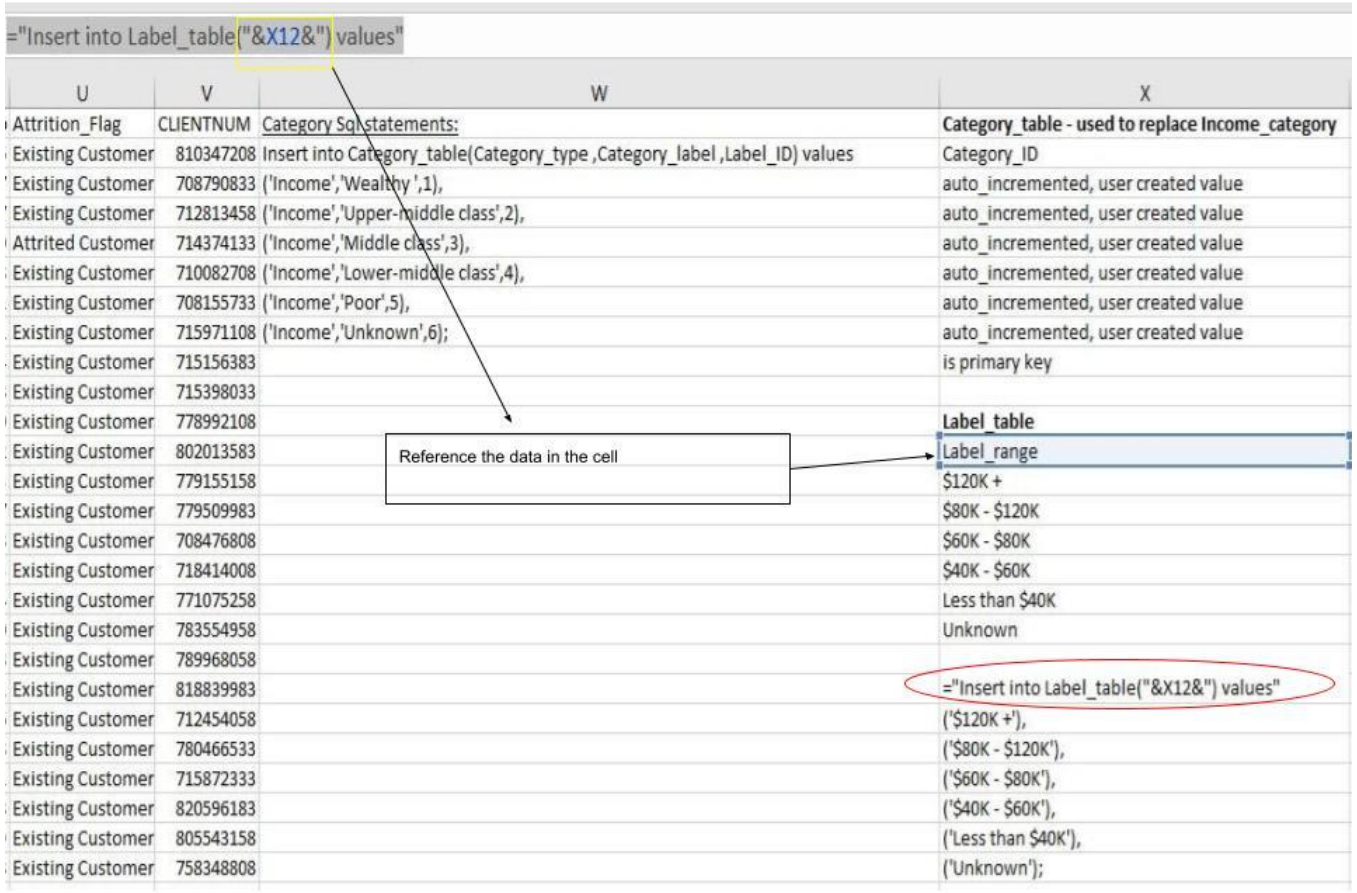
Form the needed relationships between the data.

X	Y	Z	AA
Category_table - used to replace Income_category			
Category_ID	Category_type	Category_label	Label_ID
auto_incremented, user created value	Income	Wealthy	is a forigen key to label_table
auto_incremented, user created value	Income	Upper-middle class	
auto_incremented, user created value	Income	Middle class	
auto_incremented, user created value	Income	Lower-middle class	
auto_incremented, user created value	Income	Poor	
auto_incremented, user created value	Income	Unknown	
is primary key			
Label_table			
Label_range	Label_ID		
$120K +	auto_incremented, user created value		
$80K - $120K	auto_incremented, user created value		
$60K - $80K	auto_incremented, user created value		
$40K - $60K	auto_incremented, user created value		
Less than $40K	auto_incremented, user created value		
Unknown	auto_incremented, user created value	is primary key	
sql statements:			
Insert into Label_table(Label_range) values			
('$120K +'),			
('$80K - $120K'),			
('$60K - $80K'),			
('$40K - $60K'),			
('Less than $40K'),			
('Unknown');			

CODE EXAMPLES

Excel concatation

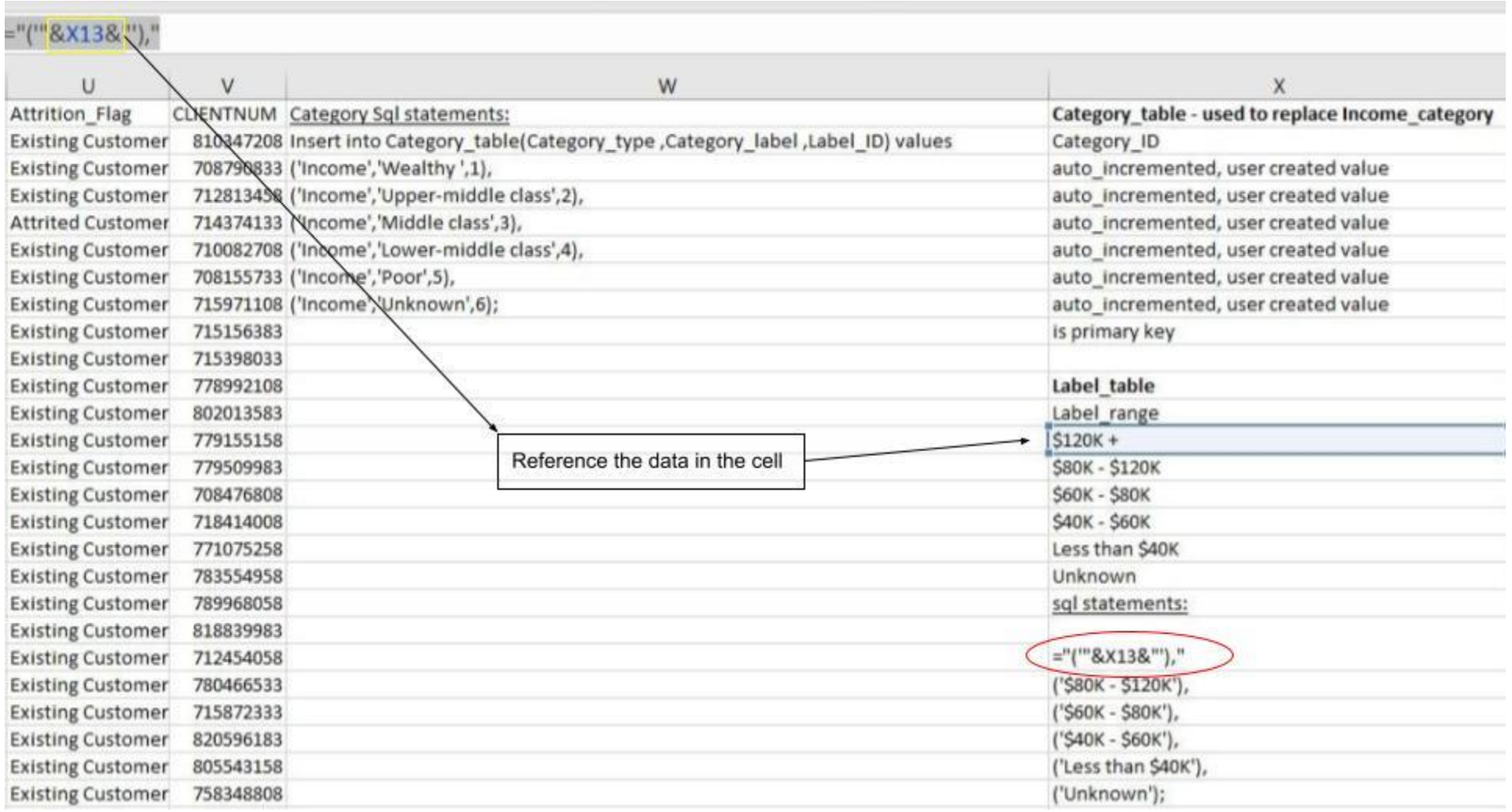
I used a form of concatenation in excel to formulate SQL queries.



U	V	W	X
Attrition_Flag	CLIENTNUM	Category Sql statements:	**Category_table - used to replace Income_category**
Existing Customer	810347208	Insert into Category_table(Category_type ,Category_label ,Label_ID) values	Category_ID
Existing Customer	708790833	('Income','Wealthy ',1),	auto_incremented, user created value
Existing Customer	712813458	('Income','Upper-middle class',2),	auto_incremented, user created value
Attrited Customer	714374133	('Income','Middle class',3),	auto_incremented, user created value
Existing Customer	710082708	('Income','Lower-middle class',4),	auto_incremented, user created value
Existing Customer	708155733	('Income','Poor',5),	auto_incremented, user created value
Existing Customer	715971108	('Income','Unknown',6);	auto_incremented, user created value
Existing Customer	715156383		is primary key
Existing Customer	715398033		
Existing Customer	778992108		**Label_table**
Existing Customer	802013583		Label_range
Existing Customer	779155158		$120K +
Existing Customer	779509983		$80K - $120K
Existing Customer	708476808		$60K - $80K
Existing Customer	718414008		$40K - $60K
Existing Customer	771075258		Less than $40K
Existing Customer	783554958		Unknown
Existing Customer	789968058		
Existing Customer	818839983		="Insert into Label_table("&X12&") values"
Existing Customer	712454058		('$120K +'),
Existing Customer	780466533		('$80K - $120K'),
Existing Customer	715872333		('$60K - $80K'),
Existing Customer	820596183		('$40K - $60K'),
Existing Customer	805543158		('Less than $40K'),
Existing Customer	758348808		('Unknown');

CODE EXAMPLES

Excel concatation



U	V	W	X
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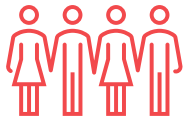
Attrited Customer	714374133	('Income','Middle class',3),	auto_incremented, user created value
Existing Customer	710082708	('Income','Lower-middle class',4),	auto_incremented, user created value
Existing Customer	708155733	('Income','Poor',5),	auto_incremented, user created value
Existing Customer	715971108	('Income','Unknown',6);	auto_incremented, user created value
Existing Customer	715156383		is primary key
Existing Customer	715398033		
Existing Customer	778992108		**Label_table**
Existing Customer	802013583		Label_range
Existing Customer	779155158		$120K +
Existing Customer	779509983		$80K - $120K
Existing Customer	708476808		$60K - $80K
Existing Customer	718414008		$40K - $60K
Existing Customer	771075258		Less than $40K
Existing Customer	783554958		Unknown
Existing Customer	789968058		sql statements:
Existing Customer	818839983		
Existing Customer	712454058		="('"&X13&"'),"
Existing Customer	780466533		('$80K - $120K'),
Existing Customer	715872333		('$60K - $80K'),
Existing Customer	820596183		('$40K - $60K'),
Existing Customer	805543158		('Less than $40K'),
Existing Customer	758348808		('Unknown');

USE CASES OF DATA



Customer_Age	Dependent_count	Category_label	CLIENTNUM
26	2	Unknown	716800908
41	3	Lower-middle class	712133508
38	1	Upper-middle class	721514883
37	3	Lower-middle class	712827258
43	5	Wealthy	712971708
35	1	Wealthy	789541458
48	5	Lower-middle class	721084833
39	0	Lower-middle class	812979408
65	0	Lower-middle class	720769533
57	2	Wealthy	715393908
47	2	Wealthy	772457583
46	3	Wealthy	715517733

This query shows some customer data sorted by the longest months of customer inactivity.

Data like this can help a bank to make informed marketing decisions.