

- 1.) What challenges did you experience during the MySQL data-dump restoration?
- During the process of dumping my data, I encountered an issue regarding the size as I came to realize the astounding size of 45k+ objects/rows, this was so far the biggest one I handled in my years of studying. It took me some time to configure certain items in xampp such as its ini file as well as other stuff regarding the sql in order to handle such a massive file.
- 2.) With respect to the newly created MySQL table, complete the details below:

Number of Attributes:	18
Number of Objects:	45,211

- 3.) With respect to the objects inside the table, complete the details below:

Attribute	Data Type
ID	Integer
Age	Integer
Job	Varchar
Marital	Varchar
Education	Varchar
Default_Status	Varchar
Balance	Decimal
Housing	Varchar
Loan	Varchar
Contact	Varchar
Day	Tiny Integer
Month	Varchar
Duration	Integer
Campaign	Integer
Pdays	Integer
Previous	Integer
Outcome	Varchar
Target	Varchar

Job Attribute																																																													
Initial Summary	Final Summary																																																												
<table><tr><td>job</td><td>job_count ▾ 1</td></tr><tr><td>blue-collar</td><td>9732</td></tr><tr><td>management</td><td>9458</td></tr><tr><td>technician</td><td>7597</td></tr><tr><td>admin.</td><td>4998</td></tr><tr><td>services</td><td>3639</td></tr><tr><td>retired</td><td>2170</td></tr><tr><td>self-employed</td><td>1579</td></tr><tr><td>entrepreneur</td><td>1487</td></tr><tr><td>unemployed</td><td>1303</td></tr><tr><td>housemaid</td><td>1240</td></tr><tr><td>student</td><td>938</td></tr><tr><td>svcs</td><td>515</td></tr><tr><td>unknown</td><td>277</td></tr><tr><td>Adm</td><td>175</td></tr><tr><td>Ret</td><td>94</td></tr><tr><td>???</td><td>11</td></tr></table>	job	job_count ▾ 1	blue-collar	9732	management	9458	technician	7597	admin.	4998	services	3639	retired	2170	self-employed	1579	entrepreneur	1487	unemployed	1303	housemaid	1240	student	938	svcs	515	unknown	277	Adm	175	Ret	94	???	11	<table><tr><td>job</td><td>people_count ▾ 1</td></tr><tr><td>blue-collar</td><td>9732</td></tr><tr><td>management</td><td>9458</td></tr><tr><td>technician</td><td>7597</td></tr><tr><td>admin.</td><td>5171</td></tr><tr><td>services</td><td>4154</td></tr><tr><td>retired</td><td>2264</td></tr><tr><td>self-employed</td><td>1579</td></tr><tr><td>entrepreneur</td><td>1487</td></tr><tr><td>unemployed</td><td>1303</td></tr><tr><td>housemaid</td><td>1240</td></tr><tr><td>student</td><td>938</td></tr><tr><td>unknown</td><td>288</td></tr></table>	job	people_count ▾ 1	blue-collar	9732	management	9458	technician	7597	admin.	5171	services	4154	retired	2264	self-employed	1579	entrepreneur	1487	unemployed	1303	housemaid	1240	student	938	unknown	288
job	job_count ▾ 1																																																												
blue-collar	9732																																																												
management	9458																																																												
technician	7597																																																												
admin.	4998																																																												
services	3639																																																												
retired	2170																																																												
self-employed	1579																																																												
entrepreneur	1487																																																												
unemployed	1303																																																												
housemaid	1240																																																												
student	938																																																												
svcs	515																																																												
unknown	277																																																												
Adm	175																																																												
Ret	94																																																												
???	11																																																												
job	people_count ▾ 1																																																												
blue-collar	9732																																																												
management	9458																																																												
technician	7597																																																												
admin.	5171																																																												
services	4154																																																												
retired	2264																																																												
self-employed	1579																																																												
entrepreneur	1487																																																												
unemployed	1303																																																												
housemaid	1240																																																												
student	938																																																												
unknown	288																																																												
Marital Attribute																																																													
Initial Summary	Final Summary																																																												
<table><tr><td>marital</td><td>marital_count ▾ 1</td></tr><tr><td>married</td><td>27214</td></tr><tr><td>single</td><td>12790</td></tr><tr><td>divorced</td><td>4624</td></tr><tr><td>Div</td><td>583</td></tr></table>	marital	marital_count ▾ 1	married	27214	single	12790	divorced	4624	Div	583	<table><tr><td>marital</td><td>people_count ▾ 1</td></tr><tr><td>married</td><td>27214</td></tr><tr><td>single</td><td>12790</td></tr><tr><td>divorced</td><td>5207</td></tr></table>	marital	people_count ▾ 1	married	27214	single	12790	divorced	5207																																										
marital	marital_count ▾ 1																																																												
married	27214																																																												
single	12790																																																												
divorced	4624																																																												
Div	583																																																												
marital	people_count ▾ 1																																																												
married	27214																																																												
single	12790																																																												
divorced	5207																																																												
Education Attribute																																																													
Initial Summary	Final Summary																																																												
<table><tr><td>education</td><td>education_count ▾ 1</td></tr><tr><td>secondary</td><td>23082</td></tr><tr><td>tertiary</td><td>13272</td></tr><tr><td>primary</td><td>6851</td></tr><tr><td>unknown</td><td>1843</td></tr><tr><td>2nd</td><td>120</td></tr><tr><td>3rd</td><td>29</td></tr><tr><td>???</td><td>14</td></tr></table>	education	education_count ▾ 1	secondary	23082	tertiary	13272	primary	6851	unknown	1843	2nd	120	3rd	29	???	14	<table><tr><td>education</td><td>people_count ▾ 1</td></tr><tr><td>secondary</td><td>23202</td></tr><tr><td>tertiary</td><td>13301</td></tr><tr><td>primary</td><td>6851</td></tr><tr><td>unknown</td><td>1857</td></tr></table>	education	people_count ▾ 1	secondary	23202	tertiary	13301	primary	6851	unknown	1857																																		
education	education_count ▾ 1																																																												
secondary	23082																																																												
tertiary	13272																																																												
primary	6851																																																												
unknown	1843																																																												
2nd	120																																																												
3rd	29																																																												
???	14																																																												
education	people_count ▾ 1																																																												
secondary	23202																																																												
tertiary	13301																																																												
primary	6851																																																												
unknown	1857																																																												
Contact Attribute																																																													
Initial Summary	Final Summary																																																												
<table><tr><td>contact</td><td>contact_count ▾ 1</td></tr><tr><td>cellular</td><td>28947</td></tr><tr><td>unknown</td><td>13020</td></tr><tr><td>telephone</td><td>2719</td></tr><tr><td>cell.</td><td>338</td></tr><tr><td>Tel</td><td>187</td></tr></table>	contact	contact_count ▾ 1	cellular	28947	unknown	13020	telephone	2719	cell.	338	Tel	187	<table><tr><td>contact</td><td>people_count ▾ 1</td></tr><tr><td>cellular</td><td>29285</td></tr><tr><td>unknown</td><td>13020</td></tr><tr><td>telephone</td><td>2906</td></tr></table>	contact	people_count ▾ 1	cellular	29285	unknown	13020	telephone	2906																																								
contact	contact_count ▾ 1																																																												
cellular	28947																																																												
unknown	13020																																																												
telephone	2719																																																												
cell.	338																																																												
Tel	187																																																												
contact	people_count ▾ 1																																																												
cellular	29285																																																												
unknown	13020																																																												
telephone	2906																																																												

**Based on the results produced in items #1 and #2, what issues did you encounter during the clean-up process?**

During the cleanup process, finding the right SQL query can become an issue especially when different datatypes are used. The data cleanup is overall simple, but can become complex upon certain conditions during the process of constructing the SQL query.

**What are the possible repercussions if data clean-up is neglected during the “Data Preparation” phase of the CRISP-DM framework?**

During my observation on cleaning up the data, especially around the contact part, I observed that the entire first few rows are unknowns and if I did not clean the data beforehand, I might come to see that unknown may be the most common instead of contact which is the actual most common. I have also observed that clean data is much easier to read and much more manageable leading to having it easier to understand causing less errors.