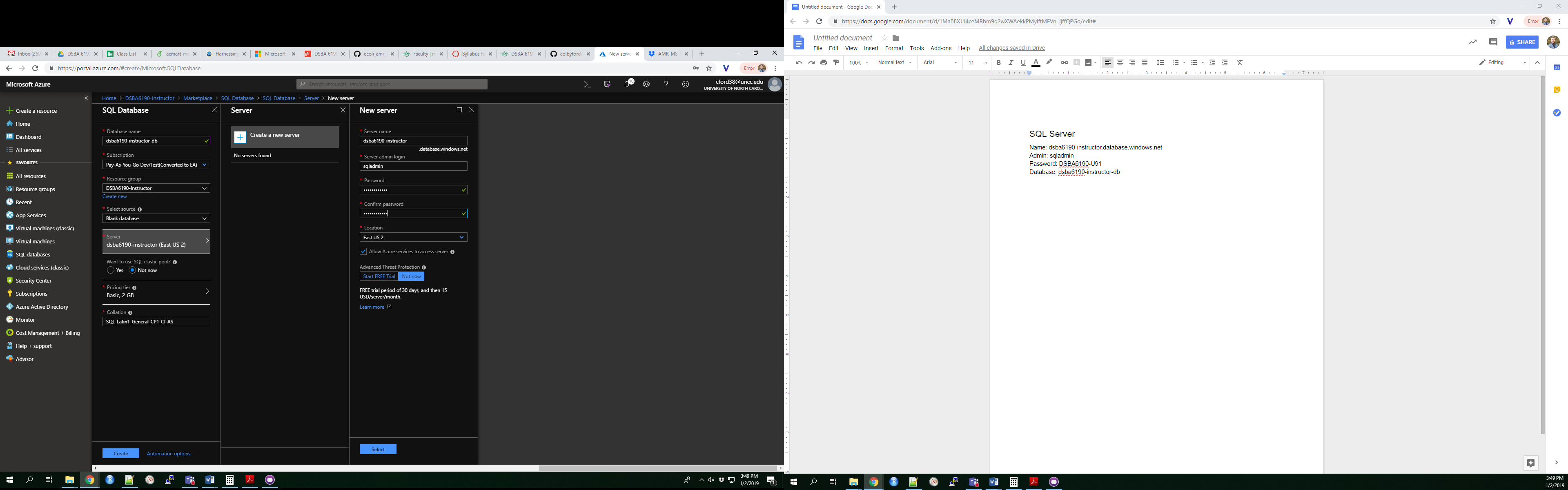
Data Platform Lab Assignment

#### (Provide your code snippets. You may answer the questions with screenshots if applicable.)

**●** - 1 per group

## Create an Azure SQL DB **●**



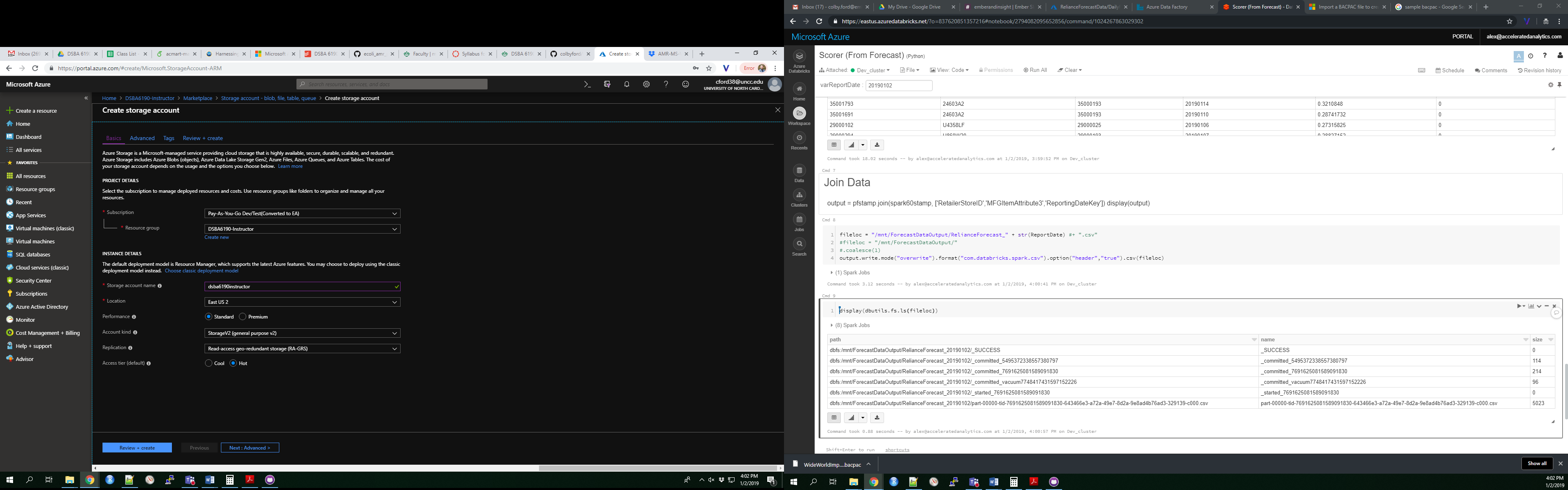
#### Notes:

* Name your database and server `**dsba6190-<GROUP>**`
* Change the pricing tier down to **Basic**
* For additional help in creating an Azure SQL Database, check out the Quickstart [here](https://docs.microsoft.com/en-us/azure/sql-database/sql-database-get-started-portal). (Don’t follow this explicitly as it uses different data, etc., but you can use it to see the steps.)

#### Questions

1. What is the username and password for your group’s database?

## Create an Azure Storage account **●**



#### Notes:

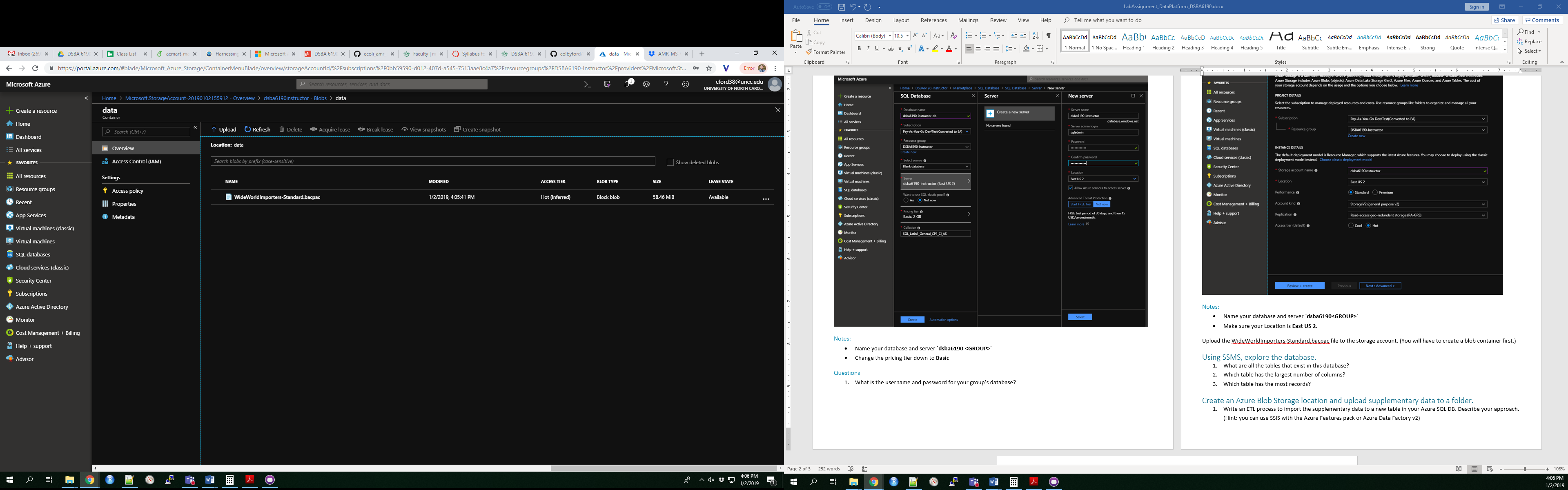
* Name your storage account `**dsba6190<GROUP>**`
* Make sure your Location is **East US 2**.

## Upload Data Backup to Storage **●**

Upload the [*WideWorldImporters-Standard.bacpac*](https://github.com/colbyford/DSBA6190-Spring2019/raw/master/2%20-%20Data%20Platform/lab/WideWorldImporters-Standard.bacpac) file to the storage account.

#### Notes:

* You will have to create and name a blob container first.



## Import the WideWorldImporters Database **●**

Using the instructions found [here](https://docs.microsoft.com/en-us/azure/sql-database/sql-database-import), import the .bacpac file from your storage container as a new database.

#### Notes:

* This will take a while. (Maybe up to 30mins.)
* You can read about the WideWorldImporters sample data [here](https://docs.microsoft.com/en-us/sql/samples/wide-world-importers-what-is?view=sql-server-2017).

## Explore the database.

#### Questions:

1. What are all the tables that exist in this database? (You can provide a screenshot as an answer.)
2. Which table might you find all the email addresses for Wide World Importers’ and the other retailers’ employees?
3. Using the [Website].[Suppliers] view, how many suppliers are from San Francisco?

## Upload supplementary data and import into the database.

Write an ETL process to import the [supplementary data](https://github.com/colbyford/DSBA6190-Spring2019/raw/master/2%20-%20Data%20Platform/lab/WWI_SaleBonuses.csv) to a new table in your Azure SQL DB. **●**

You can use SSIS with the Azure Features pack or Azure Data Factory v2 or another method you know how to use.

#### Questions:

1. Describe your approach. (Provide screenshots if possible.)
2. What did you name the table? Provide a screenshot of the table.
3. Inner join the supplementary data to the [Application].[People] table. What’s the email address for the person who has the highest bonus? Provide a screenshot of the table output.

## Understand Database vs. Data Warehouse Differences

#### Questions:

1. If you were asked to create a database or data warehouse for reporting purposes, which would you choose to create and why? The database or data warehouse will have to pull in data from multiple different systems and be focused on getting large amounts of data aggregated for enterprise-level reports.
2. What is/are the difference(s) between a star schema and a snowflake schema in a data warehouse?

## Understand platform selection differences.

#### Questions:

1. What are the capability differences in using Azure DB vs. Azure SQL DW?
2. What are the cost differences in using Azure DB vs. Azure SQL DW?
3. What are the capability differences in using Azure Blob Storage vs. Azure Data Lake Store?
4. What are the cost differences in using Azure Blob Storage vs. Azure Data Lake Store?

## Industry Use Case

*University Supplies Corporation* needs to create a data backend for their ordering system. Their system will need to be fast and return data back to the user while placing orders through their website. *University Supplies Corporation* has location all across the United States, but their current website and ordering system is hosted on Azure in the West Central US region.

#### Questions:

1. Would you recommend *University Supplies Corporation* create a database or a data warehouse? Why?
2. Would you recommend *University Supplies Corporation* use Azure SQL DB or Azure SQL DW? Why?
3. Which region would you provision the Azure SQL DB/DW? (Bonus: Are there any considerations or capability limitations for choosing this region?)
4. If *University Supplies Corporation* is expecting to house ~500GB of data in the database/data warehouse, how much would you expect for that service to cost them per month? List all your assumptions like the number of vCores, Billing Option, Backup Option, etc.