Both the ap\_2010 and the graduation data sets have many missing DBN values, so we'll use a left join when we merge the sat\_results data set with them. Because we're using a left join, our final dataframe will have all of the same DBN values as the original sat\_results dataframe.

We'll need to use the pandas df.merge() method to merge dataframes. The "left" dataframe is the one we call the method on, and the "right" dataframe is the one we pass into df.merge().

Because we're using the DBN column to join the dataframes, we'll need to specify the keyword argument on="DBN" when calling pandas.DataFrame.merge().

First, we'll assign data["sat\_results"] to the variable combined. Then, we'll merge all of the other dataframes with combined. When we're finished, combined will have all of the columns from all of the data sets.

Instructions

* Use the pandas [pandas.DataFrame.merge()](http://pandas.pydata.org/pandas-docs/stable/generated/pandas.DataFrame.merge.html" \t "_blank) method to merge the ap\_2010 data set into combined.
  + Make sure to specify how="left" as a keyword argument to indicate the correct join type.
  + Make sure to assign the result of the merge operation back to combined.
* Use the pandas df.merge() method to merge the graduation data set into combined.
  + Make sure to specify how="left" as a keyword argument to get the correct join type.
  + Make sure to assign the result of the merge operation back to combined.
* Display the first few rows of combined to verify that the correct operations occurred.
* Use the [pandas.DataFrame.shape](http://pandas.pydata.org/pandas-docs/version/0.17.0/generated/pandas.DataFrame.shape.html" \t "_blank) attribute to display the shape of the dataframe and see how many rows now exist.

# isolate dataframe in a variable

combined = data["sat\_results"]

# perform a left join with app\_2010 dataframe

combined = combined.merge(data["ap\_2010"], on = "DBN", how = "left")

#perform a left join with graduation dataframe

combined = combined.merge(data["graduation"], on = "DBN" , how = "left")

# print first few rows

print(combined.head(5))

# print shape

print(combined.shape)