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March 6th 2023

Exporting sub-national population counts for multiple countries.

These tasks all cover basic material in the course content over the past few weeks. The Mason honor code applies.

Write a codebase with a single loop processing Cuba, Guadeloupe, Malta, and Martinique which:

- Creates a folder within the `data/processed` directory using the full country name (not the iso3 code)
- Within this folder, create another directory called `processed_regions`.
- Simplify and remove small shapes for both the GID_1 and GID_2 levels.
- Write out to `processed_regions` named as "regional_level_1.shp" or "regional_level_1.shp", respectively.
- Simplify and remove small shapes for the GID_0 national boundary.
- Write out to a file named "national_outline.shp", which sits within the main country directory (not within `processed_regions`).
- Extract the subregional population for GID_2 layers to a .csv file (named "subregional_population.csv"). For each region, include the country name, country iso3 code, GID_2 region id, and population estimate rounded to the nearest integer.

You should use the global layers for both boundaries and population count data.

50 points are available for providing the correct code, with the remaining points available for submitting the correct .csv data file. The easiest way is copying screenshots of your notebook into your submission document, so the answers can be reviewed on blackboard (just make sure the code/text is large enough).

Due 11am on Monday 20th March 2023.