1. Excel:

I visually inspected the Excel files first and then exported them to CSV for wrangling and cleaning using pandas.

1. Pandas:
   * Imported the CSV files to pandas, set up an encoding to recognize the 'ñ' letter, and created the data frame.
   * Further inspection of the data using panda's functions: shape, info, head, tails, etc. With that inspection, the cleaning and tidying required by the data became evident.
   * The cleaning process required the elimination of null values or invalid ones (e.g., negative values for positive cases). Some text data was cast to date type and int.
   * The table shape did not comply with the 'Tidy data' requirements, as some observational units were columns and not rows. The dates were stored in columns instead of an attribute of each province. The table was reshaped from <i>long</i> format to <i>wide </i> using the 'melt' tool. After the transformation, the table became larger in rows but coherent with what ArcGIS and any other program would expect.
   * As the names of the provinces did not include coordinates, these were added using the library [Geocoder](https://geocoder.readthedocs.io/) and the [OpenStreetMap](https://geocoder.readthedocs.io/) API. Before that, the country's name was concatenated with the provinces' names to avoid toponym confusion.
2. Import tables as a point feature class using from XYtotable
3. Download a layer with the provinces of the Dominican Republic. This was done using the [National Statistics Office (Dominican Republic)](https://www.one.gob.do/) page. These two layers were joined spatially. The union was one to many.
4. As the points were all located in the centroid of each polygon, the tool CreateRandom Points was used to create the cases within each polygon for each date. These points were created as separate points, not multipoints, and stored in a different feature class layer. This was then joined to the layer with the dates. Before that, the tool Dissolve was used to join them into multipoint (this option was not selected in the create random points tool because then points would lose their ID, and the union would not be possible).
5. Go to layer properties and activate the time variable with the field storing the dates.
6. Next was to create the animation. In the view Tab, animation group --> Create animation

The CSV table was imported to ArcGIS Pro. The steps are described below: