IABSA Bra Review Exercise
PART A: Data visualization

PLEASE VERIFY WITH YOUR RECRUITER IF YOU ARE REQUIRED TO SOLVE THIS SECTION.

As a rule in the organization: A "warning" is raised when a company offers EXTRA-LARGE bra items but the stock available for them is less than 50% but more than 30%. The "sanctions" occur when they offer EXTRA-LARGE bra items but the stock available is less than 30%.

The percentage of availability of a certain size group is computed as the ratio between the number of available bra items in that size group over the number of offered bra items in that size group. For example, for the vendor 'Amazon US', in the Extra Large size group, the number of offered bra items is 2804 and the number of available bra items is 1402, therefore the availability is 50%.

To apply the rules, you can consider for example:
- For the Small size group, the bra item availability in the vendor 'Calvin Klein US' is 48%. This does not require a warning because the rules are focused on the Extra Large size group only.
- For the bra items in the Extra Large size group in the vendor 'Macy US', the availability is 15%. This generates a sanction.

Please review the PDF to understand the business rules that define when an item is considered a bra and how to compute its group size.

We need you to:
1. Replicate the following general dashboard for bra products (This is mandatory). It must include:
    a. The donut chart viz
    b. The filters
    c. The two KPIs
    d. The table
2. In the bottom-left of the dashboard there is a blank section: Present an adequate visualization to solve the question and determine for which vendors they must raise a warning and which ones should be sanctioned.
3. (Optional) Apply any additional features to enhance the user experience in the dashboard, such as drill-down capabilities, enabled search bar in filters, navigation buttons, custom tooltips or any other elements you want to propose.

Bras: **offer** and **availability**
Monthly vendor analysis for IABSA

April 2020
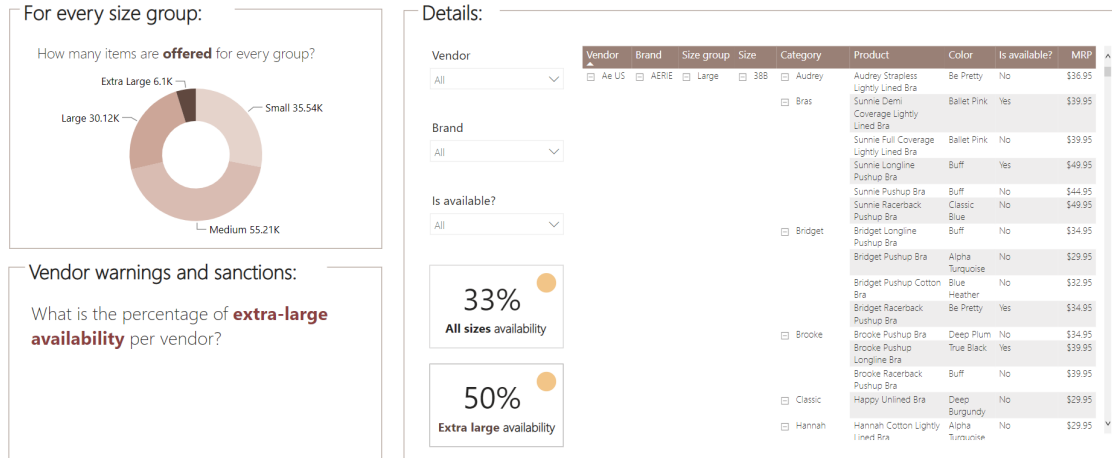
This must be done in Power BI or Tableau. No other tool is accepted.

HEADS-UP!

The dataset provided by the scrapping has quality issues. Solve them as you prefer spending less time possible, and consider the time you will need for the visualizations. The decided approach will be discussed during the interview.

File Structure:

In the dataset folder, you'll find several ".csv" files. Each file presents the innerwear products presented by a determined vendor. A vendor may distribute products from several brands.

Field	Description	Example
product_name	Product complete name	Dream Angels Push-Up Bra
mrp	Maximum retail price	49.5
pdp_url	URL of the product detail page	https://www.victoriassecret.com/bras/shop-all-bras/push-up-bra-dream-angels?ProductID=334137&CatalogueType=OLS
color	The official color of the product.	Black with Metropolis Solid Lace
total_sizes	The list of sizes publicly **offered** by the vendor as available to buy.	["30A", "30B", "30C", "30D", "30DD", "30DDD", "32A", "32B", "32C", "32D", "32DD", "32DDD", "34A", "34B", "34C", "34D", "34DD", "34DDD", "36A", "36B", "36C", "36D", "36DD", "36DDD", "38A", "38B", "38C", "38D", "38DD", "38DDD"]
available_size	The list of the sizes that are actually **available** in the vendor warehouse.	30C,30D,30DD,32B,32C,32D,32DD,32DDD,34B,34C,34D,34DD,34DDD,36B,36C,36D,36DD,36DDD,38C,38D
brand_name	Product brand	Victoria's Secret

product_category	Product category	Push-Up Bra
retailer	The official name of the vendor	Amazon US
description	Full description of the product	Our most heavenly push-up ever, with softer Memory Fit padding for lots of lightweight lift, stretchier lace sides for more comfort and a ...
rating	The average rating that customers gave to the product on that website	5
review_count	The number of reviews from customers that gave a rating to the product on that website	8
scrapping_datetime	The date and time when the data was extracted from the website	25-04-2020 13:25

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Business rules:
1. The type of innerwear may be identified for the structure of the size:
    - [S, M, L, XL, XXL,...] are **not bras**. These sizes are related to bikinis, panties or tops.
    - [6,7,8,9,...] are **not bras**. They are related to boypants, briefs, thongs, knickers, and other below-navel items.
    - [A,B,C,D, . . .] are **not considered bras**. These sizes are related to adhesive silicone bras.
    - [1X, 2X, 3X,...] are **considered bras**. They include body, dresses and chest-related items for big sizes.
    - [34A, 36B, 40D, 36A/B, 36G(4D),...] are **considered bras**. These are the most common size structures for bras in which the number describes the underbust size and the letter is related to the bust size.

2. According to the size, the bras are categorized into **4 size groups**:
    a. "Small" = Underbust sizes in the group: [30,32]
    b. "Medium" = Underbust sizes in the group: [34,36]
    c. "Large" = Underbust sizes in the group: [38,40]
    d. "Extra Large" = Underbust sizes in the group: [42,44,46] and sizes with the structure [1X, 2X, 3X,...]

3. The IABSA considers "big size" to the "Extra Large" size group.