B) Questions: Defining objects as data

1. Choose an object to define: e.g. near you or something you like or want to understand better.
2. Describe the object in at least 100 words.
3. Quantify the object into (at least 10) variables.
4. Form a data-driven research question based on your variables and the description of the object.

1. Smartphone
2. A smartphone is a versatile and compact electronic device that has become an essential part of modern daily life. Typically small enough to fit in the palm of one's hand, smartphones offer a wide range of features and capabilities. They serve as communication devices, information hubs, entertainment centers, and productivity tools all in one. Smartphones are equipped with high-resolution touchscreen displays, allowing users to interact with applications and content using their fingers or stylus pens. These devices are powered by advanced operating systems, such as Android or iOS, which enable users to download and install various applications, turning the smartphone into a customizable tool for specific needs. They have powerful processors and memory (RAM) to handle multitasking and run demanding applications smoothly. Smartphones provide seamless connectivity through cellular networks (e.g., 4G, 5G) and Wi-Fi, ensuring internet access wherever there is coverage.
3. Variables:

Brand: Samsung.
Model: Galaxy S10
Operating System: Android.
Screen Size: 8 inch
Camera Megapixels: 10Mp.
Storage Capacity: 128Gb.
Battery Life: 24h+
Price: 750 euros.
RAM: 8 ram.
Connectivity: 4G, 5G, WiFi.

4. Data-Driven Research Question:

How does the brand, operating system, and price of smartphones impact customer satisfaction and loyalty, considering factors like camera megapixels, battery life, and storage capacity? Are customers more satisfied and likely to remain loyal to smartphones with higher camera resolution, longer battery life, and greater storage capacity, and how do these preferences vary based on the brand and operating system of the smartphone?

C) Questions: Defining phenomena as data

1. Choose a phenomenon to define: e.g. near you or something you like or want to understand better.
2. Describe the phenomenon in at least 100 words.
3. Quantify the phenomenon into (at least 10) variables.
4. Form a data-driven research question based on your variables and the description of the phenomena.

Phenomenon: Online Shopping Behavior

Description:

Online shopping behavior refers to the actions and choices individuals make when shopping for products or services on e-commerce websites and platforms. With the widespread adoption of digital technology and the internet, online shopping has become a prominent aspect of consumer culture. It encompasses a wide range of activities, including product search, browsing, purchasing, cart abandonment, and customer reviews. Online shopping behavior is influenced by factors like product availability, pricing, convenience, and the overall user experience. Understanding how consumers behave in the online shopping environment is crucial for businesses aiming to optimize their digital marketing and sales strategies.

Variables:

Product Category: The type of product or service being considered or purchased (e.g., electronics, clothing, groceries).

Browsing Time: The duration users spend browsing products before making a purchase decision.

Number of Products Viewed: How many different products or listings users view during a shopping session.

Cart Abandonment Rate: The percentage of users who add items to their cart but do not complete the purchase.

Average Transaction Value: The average amount spent by a customer in a single online shopping session.

Device Used: Whether the shopping is done on a desktop computer, mobile device, or tablet.

Payment Method: The method chosen for payment (e.g., credit card, digital wallet, cash on delivery).

User Reviews: The presence and content of user-generated product reviews and ratings.

Promotions and Discounts: Whether users are influenced by discounts, promotions, or free shipping offers.

Geographical Location: The location of users, which may impact shipping costs and delivery times.

Data-Driven Research Question:

"How do product category, browsing time, and the presence of user reviews influence the cart abandonment rate in online shopping? Are there specific strategies or promotional tactics that can reduce cart abandonment and increase the average transaction value, taking into account geographical location and device usage as potential moderating factors?"