Mosaic Plot:
A mosaic plot is a graphical method for visualizing the conditional proportions of two categorical variables. It displays the relative frequency of different categories in a matrix of rectangles, where the area of each rectangle represents the proportion of cases in that category.

Example: Consider a dataset that includes information about the distribution of a certain trait (e.g., eye color) among different groups (e.g., gender and age groups). A mosaic plot could be used to visualize how the trait is distributed across these categories, showing the relative proportions in a visually informative way.
When to use:

- When you have two categorical variables and want to explore their joint distribution.
- Useful for visualizing relationships between categorical variables and identifying patterns or associations.

Treemap:
A treemap is a method of displaying hierarchical data using nested rectangles. The size of each rectangle represents a quantitative value, and the hierarchy is typically represented by nesting rectangles within each other.

Example: Imagine you have a hierarchical dataset representing the sales performance of various product categories and subcategories within a company. A treemap can be employed to visualize the total sales of each category, with subcategories nested within their respective categories, and the size of each rectangle representing the sales volume.
When to use:

- When visualizing hierarchical structures and the relative proportions of each level in the hierarchy.
- Suitable for displaying part-to-whole relationships within a hierarchy.