**Version final:**

Heatmaps are visual representations of a matrix using colors to display values. Sorting rows or columns helps identify clusters and similarities, showing relationships between variables. For data with a wide range, a logarithmic scale can highlight differences in small values. The log2 function is applied to the "EiMybs" data frame, adding 1 to each value before transformation to stabilize variance and handle data with a wide range of values. Missing data is removed to ensure a complete heatmap. A boxplot is created to visualize the log-transformed data, and a Venn diagram shows overlapping genes in the data matrix.