2.4. Medians

The median is the middle value of a set of numbers when the numbers are arranged in order from least to greatest. If the set has an odd number of values, the median is the middle value. If the set has an even number of values, the median is the average of the two middle values.

\[
\text{Median} = \begin{cases} 
\frac{1}{2}(x_{n} + x_{n+1}) & \text{if } n \text{ is odd} \\
\frac{1}{2}(x_{n/2} + x_{n/2 + 1}) & \text{if } n \text{ is even}
\end{cases}
\]

Figure 2.4: The sequence of merge operations in a merge sort.