1- Please write a function (using a comprehensible pseudocode syntax) that finds the **longest common prefix** for a string array given. The function must be implemented using **divide and conquer** approach. And also please finally calculate the worst case time complexity of the function and show the result using big-O notation.

Example: For the sample input array A shown below, the function must return "`flo`".
`A={"flow", "flower", "flowable", "flowery", "flowed", "float", "flour", "flood"}`