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/*--- hw1.java ---*/
import java.util.*;

public class hw1 {
    public static int maxlength(String[] A)
    {
        int max = A[0].length();
        for(int i = 0; i < A.length; i++)
        {
            if(A[i].length() > max)
            {
                max = A[i].length();
            }
        }
        return max;
    }

    public static void Print(String[] words, int n)
    {
        //uses the maxlength function to get the word with the max length
        //and uses it in the first for loop
        int maxlength = maxlength(words);
        for(int i = 0; i < maxlength; i++)
        {
            //use nested for loop to write the words vertically
            for(int j = 0; j < n; j++)
            {
                //if the word has run out of characters, then instead of
                //printing characters then just put two spaces
                if(words[j].length() <= i)
                    System.out.print("  ");
                else
                    System.out.print(words[j].charAt(i) + " ");
            }
            System.out.println();
        }
    }

    public static void main(String[] args)
    {
        Scanner in = new Scanner(System.in);
        //first gets how many words there will be
        int n = in.nextInt();
        //then use for loop to get the words
        String[] words = new String[n];
        for(int i = 0; i < n; i++)
            words[i] = in.next();
        System.out.println(maxlength(words));
        //calls the print function which does the rest of the work
        Print(words, n);
    }
}
```