OpenSooq Assignment - Software Engineer

Given two strings input of printable text, **a** and **b**.
let the edit distance between a and b is least number of operations needed to transform **a** to **b,** write php code that calculate edit distance using:

1.   hamming distance that only have substitute operations (ex. substitute letter X with letter Y).
2.   Levenshtein distance: that have 3 possible operators: insert, delete or substitution operations

the function should consider all possibilities but should not consider the same part twice, and report the smallest possible distance

hamming_dis(a, b) returns integer levenshtein_dis(a, b) returns integer

Your code should use the following:

1. OOP
2. two classes one for each mode hamming or levenshtein
2.   one public static helper that creates an instance, initialise the state, do the calculation and return the result
3.   define protected/private properties as needed to hold input strings and intermediate data that you use
5.   private/protected methods that you call recursively if needed
6.   those methods should take offset from the beginning of input texts instead of passing substrings
7.   document/comment your code
8.   write another file that requires your file as a library and perform some tests on it
9.   write another command line tool that prompt for two input strings and display the levenshtein distance
10.   write a web page with a form of two fields and returns the levenshteindistance, provide instructions to run it using PHP's builtin web server from command line

example levenshtein distances a:
  "this is a test"
b: "this is test"
levenshtein: 2 operations (remove a and next space)

a: "this is test" b:
  "the is test"
levenshtein: 2 operations (replace i with e in this and remove s)