QUESTION:

Pseudocode for Viterbi algorithm

ANSWER:

Viterbi Algorithm:

Viterbi(w1..n)

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For t(1....T)  # The base conditions. To set up the dynamic table. For this is sum of emission probability and start score
dp_table[1][t] = start_score[t] + emission_score[t][w1]
For i(2..n){  # After  the base condition is set, this is the recursion step for dynamic programming
For t(1...T){
dp_table[i][t] = 0
For t'(1...T){
tmp = dp_table[i-1][t'] + transition[t'][t]
If(tmp>dp_table[i][t]){
dp_table[i][t] = tmp
bp_table[i][t] = tmp // A backpointer is kept for tracing the back path
dp_table[i][t] = emission[t][wi]}}
maximumT == NULL
vit_max =0
for t(1..T)
if(dp_table[n][t] > vit_max){maximumT = t; vit_max = dp_table[n][t]}
return unpack(n,maximumT)
unpack(n..1){
i=n
tags = new array[n+1]
while(i>0){ //Traversing the backpointer for the path
tags[i] =t
t = bp_table[i][t]
I--
}
return tags;}
```