Profile Alignment (pa)

paList ← Initialize first **paList** Array with one given sequence **as** one pa

while (len(**paList**) **>** 1)

new_paList ← **[]**

while (len(**paList >** 1))

for every combination Pa_i Pa_j calculate
the best cross alignment

get the two sequences from Pa_i **and** Pa_j which
made the highest S_cross **as** S_pa_i **and** S_pa_j

paList ← all Pa_k from **paList** except Pa_i **and** Pa_j

new_pa ← align S_pa_i **and** S_pa_j **and** add the new gaps
in S_pa_i to all other sequences in Pa_i **and**
the same for S_pa_j **and** Pa_j
then combine Pa_i **and** Pa_j to one Pa

append **new_pa** to **new_paList**

(len(**paList**) **==** 1)

T   F

append **paList**[0] to **new_paList**   ∅

paList ← **new_paList**

return paList[0]