## target = [residue], template = [residue]

## structure = [(residueName,residue)]

**BuildStructure**(target,template,structure):

i,j = 0

target\_structure = []

while i < length(target) and j < length(structure):

# template[i] in alignment is blank

if template[i] == ‘-‘:

# create a residue with blank atoms

res = BlankResidue()

target\_structure.append(res)

i++

# structure file missing residue

if structure[j][0] == ‘-‘:

j++

continue

# target[i] in alignment is blank

if target[i] == ‘-‘:

i++, j++

continue

# copy the atoms

res = copyAtoms(structure[j][1])

# change the residue name for atoms

changeResidueName(res,target[i])

target\_structure.append(res)

i++, j++

final\_structure = []

for res in target\_structure:

for atom in res:

if not atom.blank:

final\_structure.append(atom)