(vii) Algorithm for elective courses

step-1 : Create a structure "student".
step-2 : Declare name of size 40.
step-3 : SET count[3] = {0, 0, 0}
step-4 : Input the value of n from user.
step-5 : Create another structure "student".
step-6 : SET i=0
step-7 : Repeat step-8 while i<3.
step-8 : SET i=i+1.
step-9 : PRINT i+1.
step-11 : ~~SET i=0~~ Again SET i=0.
step-12 : Repeat step-13 while i<n
step-13 : SET i=i+1.
step-14 : Input student[i].name from user.
step-15 : Input student[i].elective from user.
step-16 : Repeat step-6 again.
step-17 : Repeat step-18 while i<n.
step-18 : SET i=i+1.
step-19 : IF student[i].elective = 1
SET count[0] = count[0]+1.
ELSE IF student[i].elective = 2
SET count[1] = count[1] +1.
ELSE
SET count[2] = count[2]+1.

step-20 : Declare variable x and input x from the user.

step-21 : Repeat step-6 again.

step-22 : Repeat step-23 while i<n.

step-23 : SET i=i+1 again.

step-24 : IF student[i].elective = x
PRINT student[i].name.

step-25 : PRINT electives[0], count[0]
PRINT electives[1], count[1]
PRINT electives[2], count[2]

step-26 : IF count[0] < 3
PRINT %s students must chose another elective due to less numb elective[0].

step-27 : Input choice from user.

step-28 : IF student[i].elective = 1
SET student[i].elective = choice.
SET count[0] = count[0] - 1
SET count[choice-1] = count[choi +

step-29 : IF count[1] < 3
PRINT %s students must chose another elective due to less numb electives[1].

step-30 : Repeat step-6 again.
step-31 : Repeat step-32 while i<n.
step-32 : SET i=i+1.
step-33 : IF student[i].elective =2
SET student[i].elective = choice.
SET count[0] = count[0] - 1.
SET count[choice-1] = count[choice-1] +1.

step-34 : IF count[2] < 3
PRINT %d students must chose another elective due to less number, electives[2].

step-35 : Repeat step-6 again.
step-36 : Repeat step-37 while i<n.
step-37 : SET i=i+1.
step-38 : IF student[i].elective = 3.
SET student[i].elective = choice.
SET count[0] = count[0] - 1.
SET count[choice-1] = count[choice-1] +1.
step-39 : Repeat step-6 again.
step-40 : Repeat step-41 while i<3.
step-41 : SET i=i+1.
step-42 : PRINT students in %d : electives[i].
step-43 : SET j=0.
step-44 : Repeat step-45 while j<n.
step-45 : SET j=j+1.
step-46 : IF student[j].elective = i+1.
PRINT student[j].name.