// i1, i2 cut locations // temp[] record array, temp[i] => to record which number is already assigned in Proto-child

OX( p1, p2, c1, c2)

i1 = Random(n); i2 =Random(n)

if i1 > i2 swap i1 and i2

for i =0 to n-1

temp[i] = 0

for i = i1 to i2-1

c1[i] = p1[i]

temp[p1[i]] = -1

for i = 0 to n-1

if i1<=i and i <i2

continue

else

int k=0

while(temp[p2[k]] == -1)

k+=1

c1[i] = p2[k]

temp[p2[k]] = -1

for i =0 to n-1

temp[i] = 0

for i = i1 to i2-1

c2[i] = p2[i]

temp[p2[i]] = -1

for i = 0 to n-1

if i1<=i and i <i2

continue

else

int k=0

while(temp[p1[k]] == -1)

k+=1

c2[i] = p1[k]

temp[p1[k]] = -1