

Jain_Ishaan_Junior_C3.py

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1  inp_file = open("3jr_testdata.txt", "r")
2  inp_list = []
3  for line in inp_file.readlines():
4      inp_list.append(line[:len(line)].strip("\n"))
5  inp_file.close()
6
7  for element in inp_list:
8      final = ""
9      bin1 = bin(int(element[0], 16)).lstrip("0b").zfill(4)
10     bin2 = bin(int(element[1], 16)).lstrip("0b").zfill(4)
11     diagram = []
12     templist = []
13     templist2=[]
14     for i in range(len(bin1)):
15         templist.append(bin1[i])
16     for j in range(len(bin2)):
17         templist2.append(bin2[j])
18     diagram.append(templist)
19     diagram.append(templist2)
20     ##priority1
21     test1=diagram
22     if diagram[0] == ["1", "1", "1", "1"]:
23         final = "B+"
24         diagram[0]= ["0", "0", "0", "0"]
25     if diagram[1] == ["1", "1", "1", "1"]:
26         final = "~B+"
27         diagram[1] = ["0", "0", "0", "0"]
28     if diagram[0][0] == "1" and diagram[0][1] == "1":
29         if diagram[1][0] == "1" and diagram[1][1]== "1":
30             final = "A+"
31             diagram[0][0]="0"
32             diagram[1][0] = "0"
33             diagram[0][1] = "0"
34             diagram[1][1] = "0"
35     if diagram[0][1] == "1" and diagram[0][2] == "1":
36         if diagram[1][1] == "1" and diagram[1][2] == "1":
37             final = "C+"
38             diagram[0][1]="0"
39             diagram[1][1] = "0"
40             diagram[0][2] = "0"
41             diagram[1][2] = "0"
42     if diagram[0][2] == "1" and diagram[0][3] == "1":
43         if diagram[1][2] == "1" and diagram[1][3] == "1":
44             final = "~A+"
45             diagram[0][2]="0"
46             diagram[1][2] = "0"
47             diagram[0][3] = "0"
48             diagram[1][3] = "0"
49     ## priority2
50     if diagram[0][0] == "1" and diagram[1][0] == "1" and diagram[0][3]=="1" and diagram[1][3]=="1":
51         final = "~C+"
52         diagram[0][0] = "0"
53         diagram[1][0] = "0"
54         diagram[0][3] = "0"
55         diagram[1][3] = "0"
56     ##gap line
57     if final == "":
58         ##priority3
59         if diagram[0][0] == "1" and diagram[0][1] == "1":
60             final += "AB+"
61             diagram[0][0]="0"
62             diagram[0][1]="0"
63         elif diagram [0][1] == "1" and diagram[0][2] == "1":
64             final += "BC+"
65             diagram[0][1] = "0"
66             diagram[0][2] = "0"
67         elif diagram[0][2] == "1" and diagram[0][3] == "1":
68             final += "~AB+"
69             diagram[0][2]="0"
70             diagram[0][3]="0"
71         if diagram[1][0] == "1" and diagram[1][1] == "1":
72             final += "A~B+"
73             diagram[1][0]="0"
74             diagram[1][1]="0"
75         elif diagram [1][1] == "1" and diagram[1][2] == "1":
76             final += "~BC+"
77             diagram[1][1]="0"
78             diagram[1][2]="0"
79         elif diagram[1][2] == "1" and diagram[1][3] == "1":
80             final += "~A~B+"
81             diagram[1][2]="0"
82             diagram[1][3]="0"

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83     if diagram[0][0]=="1" and diagram[1][0]=="1":
84         final += "A~C+"
85         diagram[0][0]="0"
86         diagram[1][0]="0"
87     elif diagram[0][1]=="1" and diagram[1][1]=="1":
88         final += "AC+"
89         diagram[0][1]="0"
90         diagram[1][1]="0"
91     elif diagram[0][2]=="1" and diagram[1][2]=="1":
92         final += "~AC+"
93         diagram[0][2]="0"
94         diagram[1][2]="0"
95     elif diagram[0][3] == "1" and diagram[1][3] == "1":
96         final += "~A~C+"
97         diagram[0][3]="0"
98         diagram[1][3]="0"
99     ##priority4
100    if diagram[0][0]=="1" and diagram[0][3]=="1":
101        final += "B~C+"
102    if diagram[1][0]=="1" and diagram[1][3]=="1":
103        final += "~B~C+"
104    ##priority5
105    if diagram[0][0] == "1" and test1[1][0] == "0" and (test1[0] == ["1", "0", "0", "0"] or test1[0] == ["1", "0", "1", "0"]) :
106        final += "AB~C+"
107    if diagram[0][1] == "1" and test1[1][1] == "0" and (test1[0] == ["0", "1", "0", "0"] or test1[0] == ["0", "1", "0", "1"]):
108        final += "ABC+"
109    if diagram[0][2] == "1" and test1[1][2] == "0" and (test1[0] == ["0", "0", "1", "0"] or test1[0] == ["1", "0", "1", "0"]):
110        final += "~ABC+"
111    if diagram[0][3] == "1" and test1[1][3] == "0" and (test1[0] == ["0", "0", "0", "1"] or test1[0] == ["0", "1", "0", "1"]):
112        final += "~AB~C+"
113    if diagram[1][0] == "1" and test1[0][0] == "0" and (test1[1] == ["1", "0", "0", "0"] or test1[1] == ["1", "0", "1", "0"]) :
114        final += "A~B~C+"
115    if diagram[1][1] == "1" and test1[0][1] == "0" and (test1[1] == ["0", "1", "0", "0"] or test1[1] == ["0", "1", "0", "1"]):
116        final += "A~BC+"
117    if diagram[1][2] == "1" and test1[0][2] == "0" and (test1[1] == ["0", "0", "1", "0"] or test1[1] == ["1", "0", "1", "0"]):
118        final += "~A~BC+"
119    if diagram[1][3] == "1" and test1[0][3] == "0" and (test1[1] == ["0", "0", "0", "1"] or test1[1] == ["0", "1", "0", "1"]):
120        final += "~A~B~C+"
121    #output
122    if final != "":
123        if final[len(final)-1]=="+":
124            final = final.strip("+")
125    print(final)
126
127
128
129
130

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