

Bhatnagar_S_ACSL_Veitch.py

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1 output = []
2 for inps in range(5):
3     hexa = list(input())
4     hexa[0] = str(bin(int(hexa[0], 16)))[2:]
5     hexa[1] = str(bin(int(hexa[1], 16)))[2:]
6     while len(hexa[0]) < 4:
7         hexa[0] = "0"+hexa[0]
8     while len(hexa[1]) < 4:
9         hexa[1] = "0"+hexa[1]
10    hexa[0] = list(hexa[0])
11    hexa[1] = list(hexa[1])
12    for i in range(len(hexa[0])):
13        hexa[0][i] = int(hexa[0][i])
14        hexa[1][i] = int(hexa[1][i])
15    expression = []
16
17    if hexa[0] == [1,1,1,1]:
18        expression.append("B")
19        hexa[0] = [0,0,0,0]
20    if hexa[1] == [1,1,1,1]:
21        expression.append("~B")
22        hexa[1] = [0,0,0,0]
23    if hexa[0][0] == 1 and hexa[0][1] == 1 and hexa[1][0] == 1 and hexa[1][1] == 1:
24        expression.append("A")
25        hexa[0][0] = 0
26        hexa[0][1] = 0
27        hexa[1][0] = 0
28        hexa[1][1] = 0
29    if hexa[0][1] == 1 and hexa[0][2] == 1 and hexa[1][1] == 1 and hexa[1][2] == 1:
30        expression.append("C")
31        hexa[0][1] = 0
32        hexa[0][2] = 0
33        hexa[1][1] = 0
34        hexa[1][2] = 0
35    if hexa[0][2] == 1 and hexa[0][3] == 1 and hexa[1][2] == 1 and hexa[1][3] == 1:
36        expression.append("~A")
37        hexa[0][2] = 0
38        hexa[0][3] = 0
39        hexa[1][2] = 0
40        hexa[1][3] = 0
41    if hexa[0][0] == 1 and hexa[0][3] == 1 and hexa[1][0] == 1 and hexa[1][3] == 1:
42        expression.append("~C")
43        hexa[0][0] = 0
44        hexa[0][3] = 0
45        hexa[1][0] = 0
46        hexa[1][3] = 0
47    if hexa[0][0] == 1 and hexa[0][1] == 1:
48        expression.append("AB")
49        hexa[0][0] = 0
50        hexa[0][1] = 0
51    if hexa[0][1] == 1 and hexa[0][2] == 1:
52        expression.append("BC")
53        hexa[0][1] = 0
54        hexa[0][2] = 0
55    if hexa[0][2] == 1 and hexa[0][3] == 1:
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56     expression.append("~AB")
57     hexa[0][2] = 0
58     hexa[0][3] = 0
59     if hexa[1][0] == 1 and hexa[1][1] == 1:
60         expression.append("A~B")
61         hexa[1][0] = 0
62         hexa[1][1] = 0
63     if hexa[1][1] == 1 and hexa[1][2] == 1:
64         expression.append("~BC")
65         hexa[1][1] = 0
66         hexa[1][2] = 0
67     if hexa[1][2] == 1 and hexa[1][3] == 1:
68         expression.append("~A~B")
69         hexa[1][2] = 0
70         hexa[1][3] = 0
71     if hexa[0][0] == 1 and hexa[1][0] == 1:
72         expression.append("A~C")
73         hexa[0][0] = 0
74         hexa[1][0] = 0
75     if hexa[0][1] == 1 and hexa[1][1] == 1:
76         expression.append("AC")
77         hexa[0][1] = 0
78         hexa[1][1] = 0
79     if hexa[0][2] == 1 and hexa[1][2] == 1:
80         expression.append("~AC")
81         hexa[0][2] = 0
82         hexa[1][2] = 0
83     if hexa[0][3] == 1 and hexa[1][3] == 1:
84         expression.append("~A~C")
85         hexa[0][3] = 0
86         hexa[1][3] = 0
87     if hexa[0][0] == 1 and hexa[0][3] == 1:
88         expression.append("B~C")
89         hexa[0][0] = 0
90         hexa[0][3] = 0
91     if hexa[1][0] == 1 and hexa[1][3] == 1:
92         expression.append("~B~C")
93         hexa[1][0] = 0
94         hexa[1][3] = 0
95     if hexa[0][0] == 1:
96         expression.append("AB~C")
97     if hexa[0][1] == 1:
98         expression.append("ABC")
99     if hexa[0][2] == 1:
100        expression.append("~ABC")
101     if hexa[0][3] == 1:
102        expression.append("~AB~C")
103     if hexa[1][0] == 1:
104        expression.append("A~B~C")
105     if hexa[1][1] == 1:
106        expression.append("A~BC")
107     if hexa[1][2] == 1:
108        expression.append("~A~BC")
109     if hexa[1][3] == 1:
110        expression.append("~A~B~C")
111
112
113     output.append("+" .join(expression))

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114 for i in output:  
115     print(i)  
116
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