Lab 2   Part B

Design a 8-bit full adder. Draw a block

$A_7$ $B_7$   $A_6$ $B_6$   $A_5$ $B_5$   $A_4$ $B_4$   $A_3$ $B_3$   $A_2$ $B_2$   $A_1$ $B_1$   $A_0$ $B_0$ $C_{in}$

* C = count
* S = sum

| 1-bit Full adder | 1-bit full adder | 1-bit full adder | 1-bit full adder | 1-bit full adder | 1-bit full adder | 1-bit full adder | 1-bit full adder |

$C_7$ $S_7$   $C_6$ $S_6$   $C_5$ $S_5$   $C_4$ $S_4$   $C_3$ $S_3$   $C_2$ $S_2$   $C_1$ $S_1$   $C_0$ $S_0$
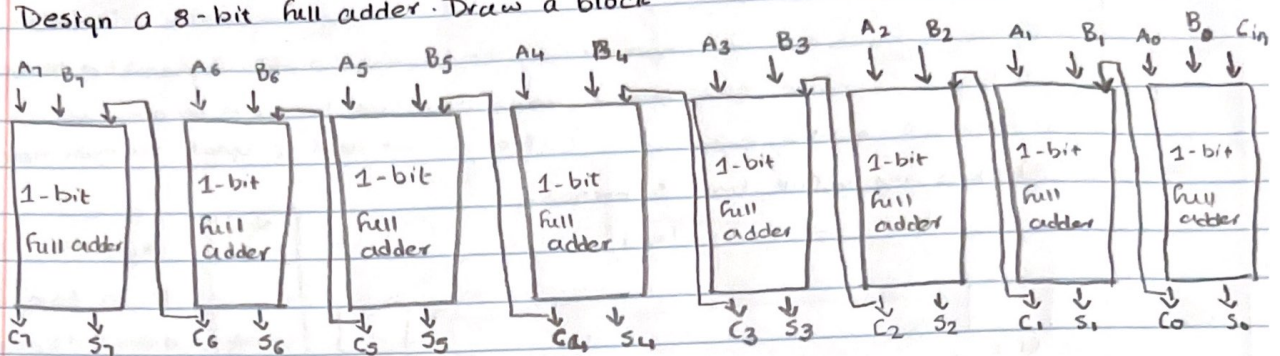
Draw the circuit for the following Boolean expression:

$P = (x \text{ and } Y) \text{ or } (\text{not } X \text{ or } Z)$

x

AND   xY

Y

$P = xY + (x' + Z)$

OR

x'
NOT   OR   x' + Z

z
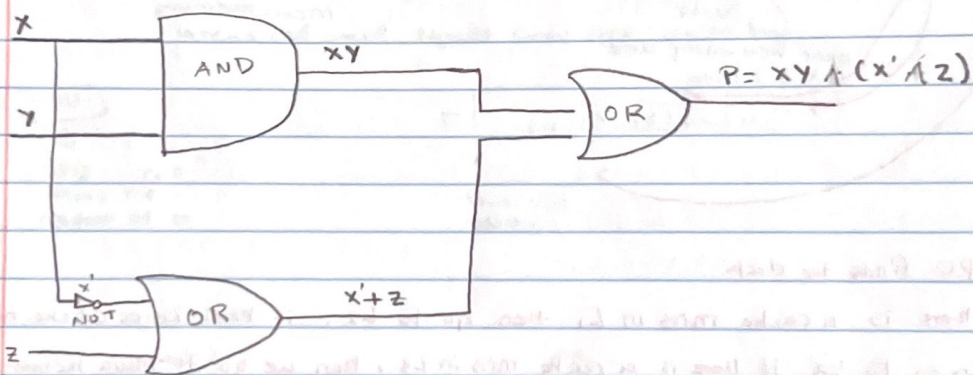
Lab 2 part C

1. Store the following value in EAX register: 12784569h

31                                                                    0

| 12 | 78 | 45 | 69 |

4 bytes

1 2 7 8 45  6 9