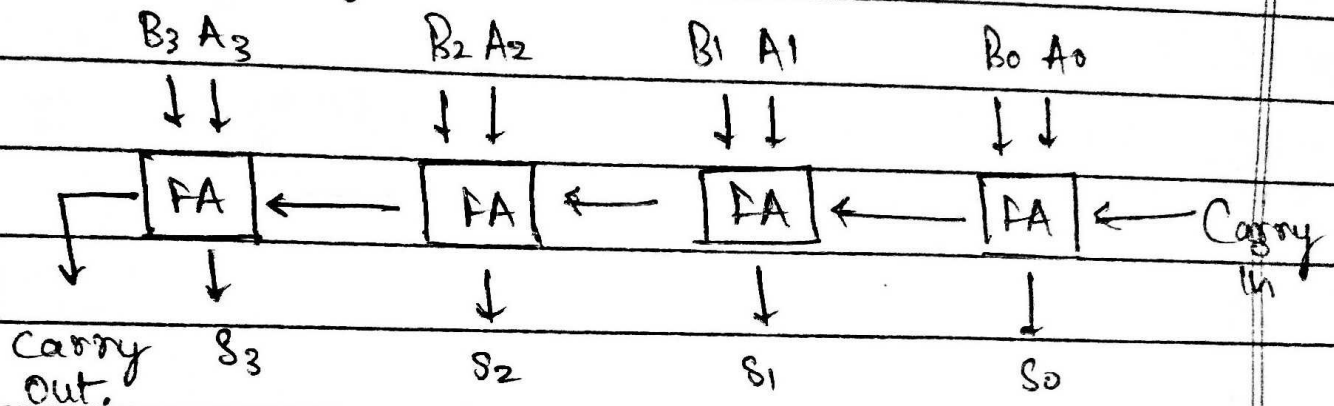
Circuit Diagram



4 bits Ripple Carry Adder

Each full Adder IC consists of one full Adder circuit

Case 1

$A_0 = 1$	$A_1 = 1$	$A_2 = 0$	$A_3 = 1$
$B_0 = 1$	$B_1 = 1$	$B_2 = 0$	$B_3 = 1$
$S_0 = 0$	$S_1 = 1$	$S_2 = 1$	$S_3 = 0$
$C_0 = 1$	$C_1 = 1$	$C_2 = 0$	$C_3 = 1$

Case 2

$A_0 = 1$	$A_1 = 0$	$A_2 = 1$	$A_3 = 1$
$B_0 = 1$	$B_1 = 0$	$B_2 = 1$	$B_3 = 1$
$S_0 = 0$	$S_1 = 1$	$S_2 = 0$	$S_3 = 0$
$C_0 = 1$	$C_1 = 0$	$C_2 = 1$	$C_3 = 1$

Case 3

$A_0 = 0$	$A_1 = 1$	$A_2 = 1$	$A_3 = 1$
$B_0 = 1$	$B_1 = 1$	$B_2 = 1$	$B_3 = 1$
$S_0 = 1$	$S_1 = 0$	$S_2 = 1$	$S_3 = 1$
$C_0 = 0$	$C_1 = 1$	$C_2 = 1$	$C_3 = 1$