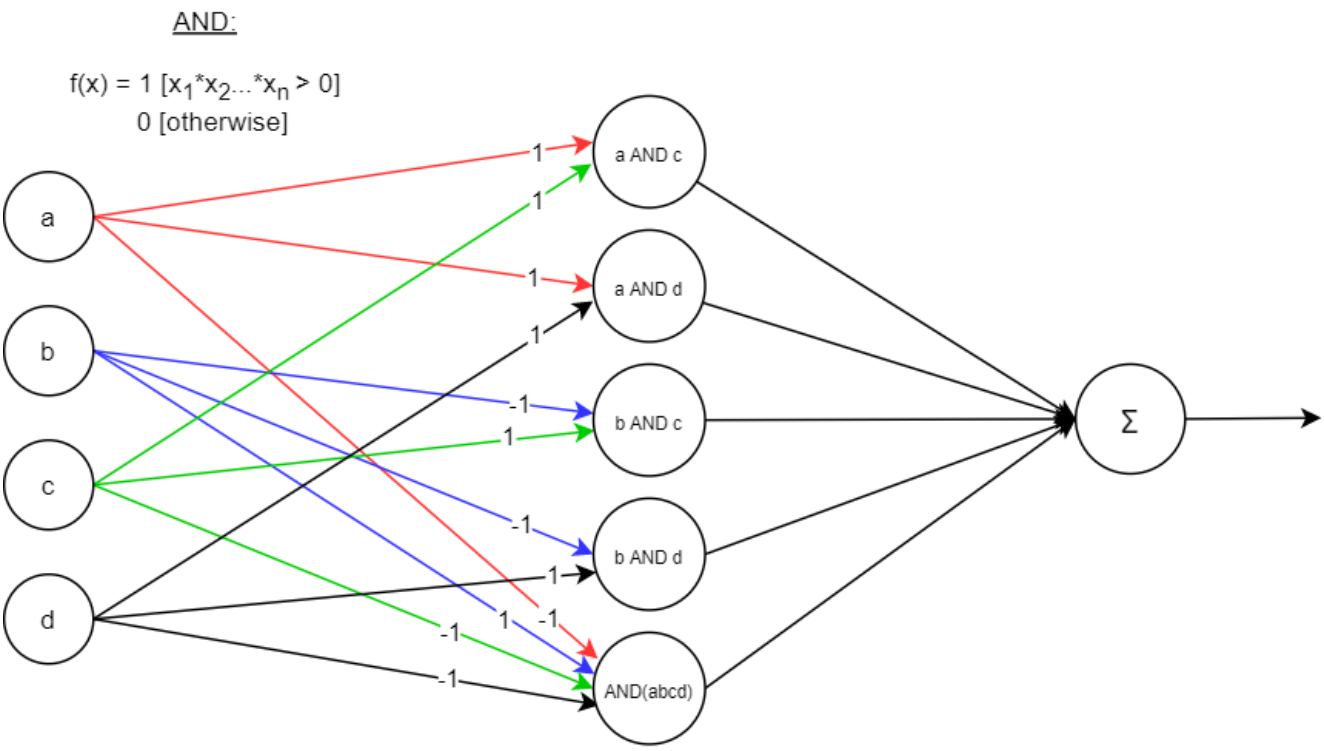
1.



NOTE: sigma function is actually the **OR** function, which is described as:

$f(x) = 1\ [x_1+x_2...+x_n > 0]$

0 [otherwise]

2. Because the activation or link function input is x * $weight_i$, which means that the input to the function will always be zero if the weights are zero. To avoid this problem, you can add a bias to the hidden nodes.

3.