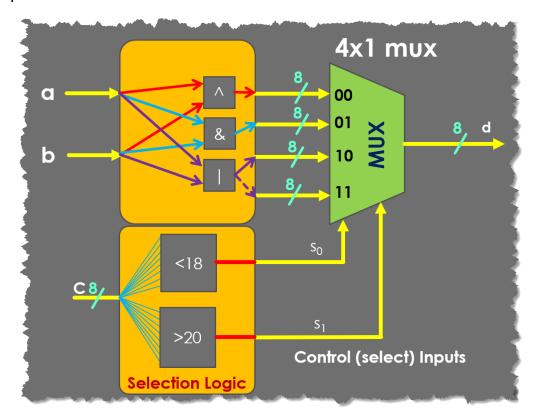
Conditional Statement-Multiplexer-General Case: Quiz Solution

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The following figure shows the circuit structure of the if-else statement in the quiz question.



If c is less than 18 then S0 = 1 and S1 = 0, or the select input is "01". Therefore, the (a&b) function is connected to the output.

If c is greater than 20 then S0 = 0 and S1 = 1, or the select input is "10". Therefore, the (a|b) function is connected to the output.

Otherwise, S0 = 0 and S1 = 0 or the select input is "00". Therefore, the (a^b) function is connected to the output.