

# uebung\_2.1.5

## Student Group

First Name	Surname	Matrikel Nr.

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### Exercise 2.1.5 Two LEDs on one digital output

For a circuit you need to control two LEDs, but unfortunately only one digital output is free. The supply voltage of the microcontroller and the board is  $5\text{V}$ . LED1 should have a forward voltage  $U_{f,1}=2.3\text{V}$  (red), LED2 should have a forward voltage  $U_{f,2}=2.1\text{V}$  (green).

1. Design a circuit from the existing voltage levels so that both LEDs can be driven.  
Existing voltage levels:
  1. Supply:  $5\text{V}$
  2. Digital output:  $5\text{V}$ ,  $0\text{V}$  or high impedance
1. Calculate the values for the other necessary components

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