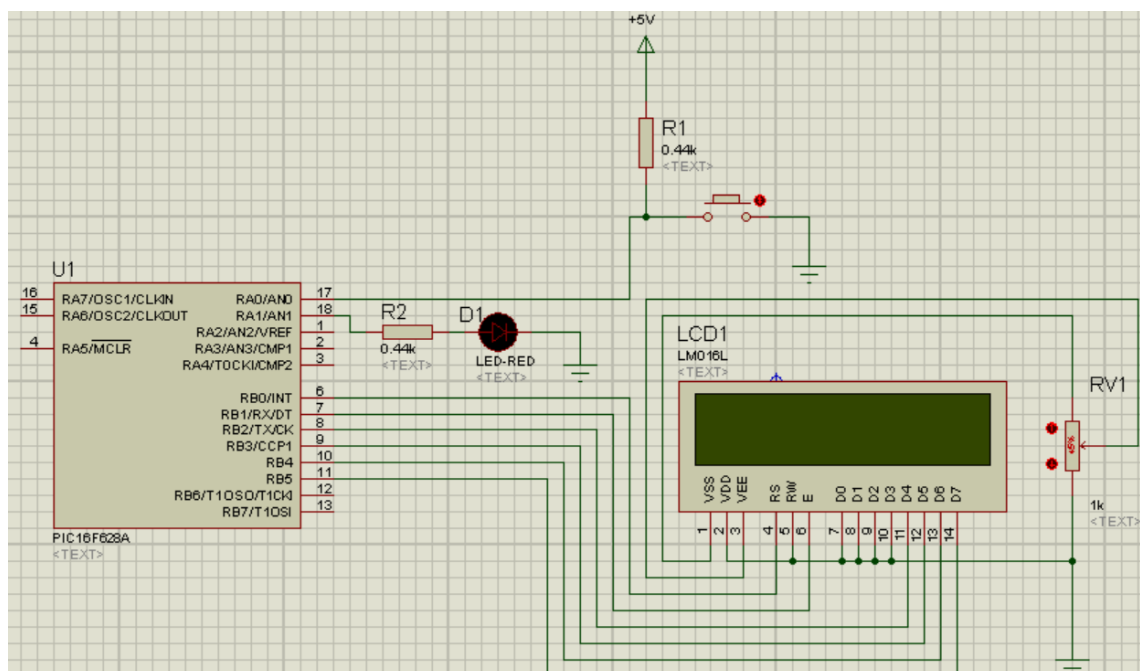


QUESTÃO 01. Faça um programa em que quando pressionado um botão, um led deve ser ligado e uma mensagem “LED ON” deve ser mostrada no LCD. Caso o botão não esteja sendo pressionado, o led deve está apagado e uma mensagem “LED OFF” deve ser mostrada no LCD. Veja sugestão de esquemático abaixo.



The diagram shows a PIC16F628A microcontroller (U1) connected to an LCD1601 (LCD1) and a potentiometer (RV1). The PIC16F628A is a 28-pin device with the following connections:

- Power:** Pin 4 (MCLR) is connected to ground. Pin 17 (AN0) is connected to +5V. Pin 18 (AN1) is connected to +5V.
- LCD1601:** Pin 1 (VSS) is connected to ground. Pin 2 (VDD) is connected to +5V. Pin 3 (VEE) is connected to ground. Pin 4 (RS) is connected to pin 10 (RB4). Pin 5 (RW) is connected to pin 11 (RB5). Pin 6 (E) is connected to pin 12 (RB6/T1OSO/T1C4). Pin 7 (D0) is connected to pin 13 (RB7/T1OSI). Pin 8 (D1) is connected to pin 6 (RB0/INT). Pin 9 (D2) is connected to pin 7 (RB1/RX/DT). Pin 10 (D3) is connected to pin 8 (RB2/TXCK). Pin 11 (D4) is connected to pin 9 (RB3/CCP1). Pin 12 (D5) is connected to pin 10 (RB4). Pin 13 (D6) is connected to pin 11 (RB5). Pin 14 (D7) is connected to pin 12 (RB6/T1OSO/T1C4).
- Potentiometer (RV1):** The wiper (center terminal) is connected to pin 13 (RB7/T1OSI). The two end terminals are connected to +5V and ground.