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/** header block **
 * code file name: ubit-test-digital-out.ino
 * hardware board (UNO/Nano/microbit.etc): microbit v2.0
 * sensors and devices needed: builtin 5x5 LED matrix
 * code description:
     this code tests digital output hardware functionality
     by blinking one (center) LED on the 5x5 LED matrix
 * IDE version used to test code: Arduino IDE v2.0.2
 * programmer(s) name: Instructor
 * date when code is created/modified: 2022_1120
 * code version/revision: v1.0
 **/

// compiler directives (none)

// include libraries (none)

// pin name definitions
// see variant.cpp for arduino pin numbers for microbit v2
const int COL = 3;    // COL3 control pin
const int ROW = 23;   // ROW3 control pin
const int LED = ROW;  // ROW3 LED

// class/object declarations (none)

// global variables (none)

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void setup() {
    // configure hardware peripherals
    // ground LED cathode
    pinMode(COL, OUTPUT);
    digitalWrite(COL, LOW);
    // set ROW pin as digital output pin
    pinMode(ROW, OUTPUT);

    // configure data communication
    Serial.begin(9600);
    // code that runs only once
    Serial.println("microbit is ready!");
}

void loop() {
    // data comm operation
    // print heart-beat message
    Serial.println("blink!");

    // data output operations
    digitalWrite(LED, HIGH);
    delay(100);
    digitalWrite(LED, LOW);
    delay(100);
    digitalWrite(LED, HIGH);
    delay(100);
    digitalWrite(LED, LOW);
    delay(700);
}

```