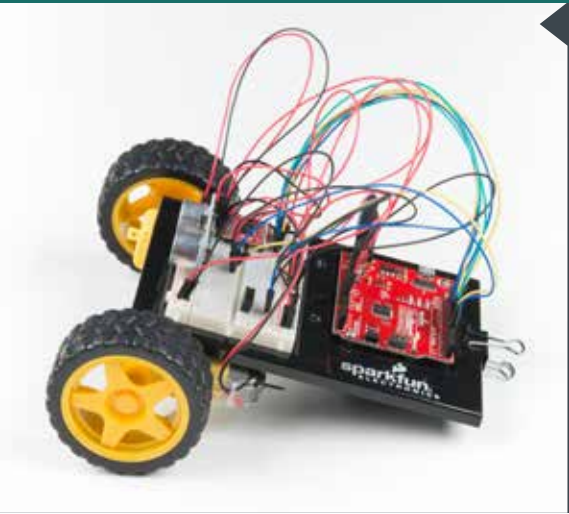
Open the Arduino IDE

Connect the RedBoard to a USB port on your computer.

Open the Sketch:
File > Examples > SIK-Guide-Code-master > **SIK_CIRCUIT_5C-AUTONOMOUS ROBOT**

Select **UPLOAD** to program the sketch on the RedBoard.



WHAT YOU SHOULD SEE

When the switch is turned off, the robot will sit still. When the switch is turned on, the robot will drive forward until it senses an object. When it senses an object in its path, it will reverse and then turn to avoid the obstacle.

PROGRAM OVERVIEW

1. **If** the switch is turned on,
2. **Then** start sensing the distance.
   - **A:** If no obstacle is detected, then drive forward.
   - **B:** If an obstacle is detected, stop, back up, and turn right.
   - **C:** If no obstacle is detected, start driving forward again.

TROUBLESHOOTING WARNING

HVAC systems in offices and schools have been known to interfere with the performance of the ultrasonic distance sensor. If you are experiencing sporadic behavior from your circuit, check your surroundings. If there are numerous air ducts in the room you are using, try moving to a different room that does not have ducts. The airflow from these ducts can interfere with the waves sent from the sensor, creating noise and resulting in bad readings.