Progress Report #9: Flappy Bird by Using an Ultrasonic Sensor

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## Theory: ultrasonic sensors

* 1. An ultrasonic sensor emits sound waves with frequency greater than 20kHz.
  2. When the trigger pin is set at HIGH with for 10 microseconds, the sensor sends an ultrasonic burst of eight pulses at 40 kHz.
  3. Meanwhile, the echo pin goes HIGH to initiate the echo-back signal.
  4. If those pulses are not reflected back, the echo signal times out and goes low after 38ms (38 milliseconds). Thus, a pulse of 38ms indicates no obstruction within the range of the sensor.
  5. The echo pin will go to LOW when echoes are detected, generating a pulse on the echo pin.
  6. We can upload the detection program to the board from the Arduino IDE and realize the graphic interface by running a JAVA script in the Processing IDE.

## Practice



