Temperature-Controlled Fan

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# Abstract

We will construct a system which measures temperature, and if it exceeds some defined threshold, a fan will be turned on. The system will have three states: On, Off, and Auto. A remote control will be used to control which state the system is in.

# Project Scope

The scope of this project will essentially be a proof of concept. As a stretch goal, we might 3-D print a hard shell to package the project.

# Minimal Objective

Our minimal objective is to create a project that will:

* Read temperature
* Turn a fan on and off based on that temperature
* Be force turned on and off by a remote control

# Stretch Objective

Our stretch objective is to create a project that, in addition to our minimal objectives, will:

* Output temperature to an on-board LCD screen
* Send temperature data wirelessly to other Arduinos, which will output it to their own LCD screens
* Change the temperature threshold via remote control
* Change fan strength via remote control
* 3-D print a hard shell to package the project

# Components:

Our project will consist of the following parts:

* Arduino Uno *(personal property)*
* DC Motor *(personal property)*
* DHT11 Temperature and Humidity Module *(personal property)*
* 16 x 2 LCD *(personal property)*
* IR module and remote *(personal property)*
* 5-V relay *(personal property)*
* Power Module *(personal property)*