

# Getting Started

## Getting the Source

```
hg clone http://hg.openjdk.java.net/dio/dev
```

## Build Instructions

### Current Build Platforms

The Device I/O Project currently supports cross-compiling on Linux x86 platforms for the Raspberry Pi (armhf).

### Build Tools

gcc-linaro-arm-linux-gnueabi-hf-raspbian  
JDK 8

### Build Steps

```
hg clone http://hg.openjdk.java.net/dio/dev
cd dev
export PI_TOOLS=<path to raspberry pi toolchain>
export JAVA_HOME=<path to JDK8>
make
```

The artifacts for the build should be `build/so/libdio.so` and `build/jar/dio.jar`.

## Running the GPIOLEDSample Application

### Prerequisites:

- 1 LED
- 1 resistor
- 1 breadboard
- 1 Raspberry Pi
- jumper wires

The `dio.jar`, `dio.samples.jar` and `libdio.so` should be in your current directory, and `java` should be in your path.

1. Connect the cathode of the LED to GND on the Raspberry Pi.
2. Connect the anode of the LED to a resistor (540 ohm pictured above).
3. Connect the other end of the resistor to GPIO18 on the Raspberry Pi

```
sudo java -Djava.security.policy=./java.policy -classpath ../dio.jar:dio-samples.jar -Djava.library.path=. -Djdk.dio.registry=./dio.properties dio.gpio.GPIOLEDSample
```

Note the use of "sudo." This is so that the java process has the proper permissions to access the GPIO device.