

# 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

[blocked URL](#)

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.