

Lab 5: Arduino IDE and Introduction to Teensy

CSE 2100-001

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Partners:

1 Objective

Install the Arduino IDE and add Teensy support as described in the lab video. Modify the provided Teensy LED blink example to flash the famous distress signal SOS in Morse code repeatedly (3 short flashes, 3 long flashes, 3 short flashes), with a 2 second delay between messages. The LED should be on for 250 milliseconds for short flashes, and 500 milliseconds for long flashes. Use a delay of 250 milliseconds between all flashes. Demo your SOS generator on the Teensy microcontroller when it is functioning properly.

1.1 Definitions

microcontroller a small computer on a single integrated circuit

Arduino IDE the open source Arduino Software IDE that makes it easy to write code and upload it to the board

Teensy is the complete USB-based microcontroller development system that is capable of implementing many types of projects. All programming is done via USB-port.

udev rules the device manager for Linux 2.6 kernel that creates/removes device nodes in the /dev directory dynamically.

tar a Linux command used to zip a collection of files and directories into a highly compressed archive file commonly called tar, gzip or bzip in Linux.

2 Question 1

What flags must be provided with the tar command to extract a tar.xz file?

The xf flag must be provided when extracting a tar.xz file.

3 Question 2

List 3 advantages of using the Arduino platform when programming microcontrollers

It is ready to use. There are many effortless functions present in Arduino software to help coding easier and faster. It also has lots of example codes.