Lab 5: Arduino IDE and Introduction to Teensy
CSE 2100-001

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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 self-contained system with a processor, memory and peripherals which can be used as an embedded system.

Arduino IDE : an open source Integrated Development Environment for writing and upload sketches to the the physical Arduino or compatible boards.i.e programming the micro controller for a specific function.

Teensy : a complete USB-based micro controller development system capable of implementing many types of projects

udev rules : a system that a LINUX OS uses that provides permissions to allow access to pieces of external hardware

tar : a LINUX utility to compress files into an archive or extracting the files from the archive.

2 Question 1

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

3 Question 2

List 3 advantages of using the Arduino platform when programming microcontrollers

i) Arduino platform provides easiest debugging environment which is cross-platform.
ii)The platform is open source and extensible through a vast and rich source of libraries
iii)Programming environment is easy-to-use and flexible