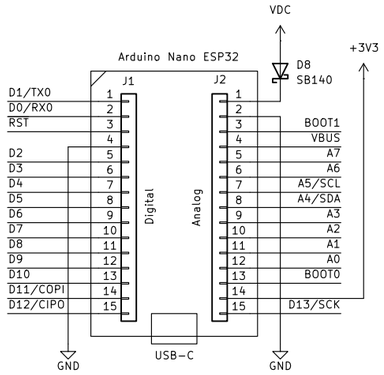

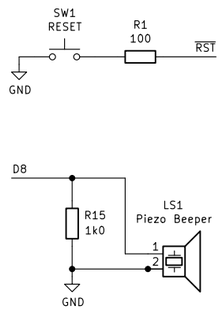

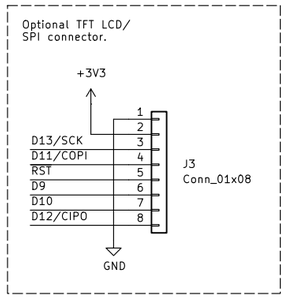

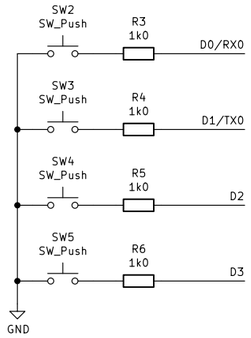

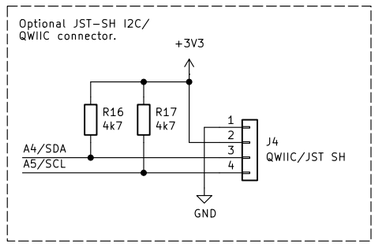

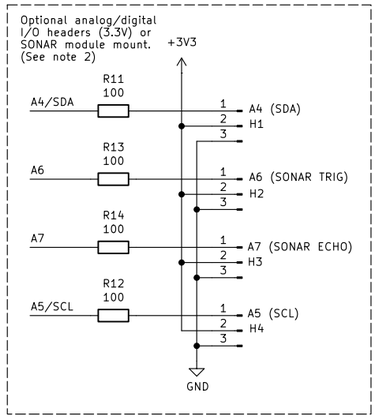

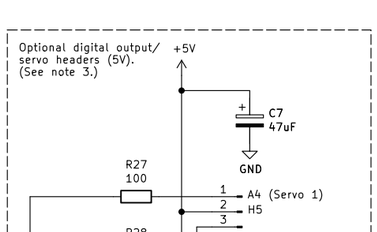

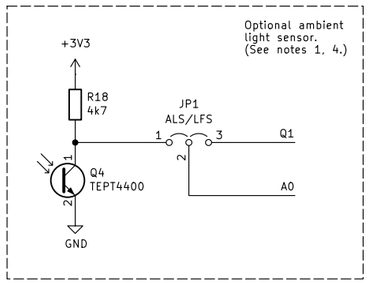

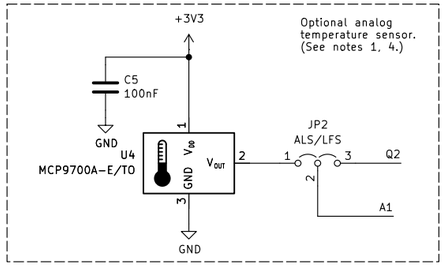

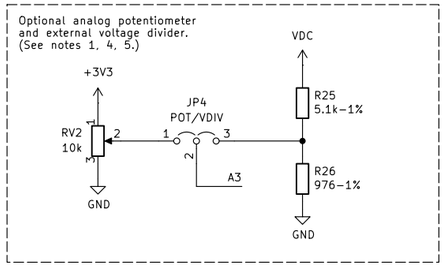

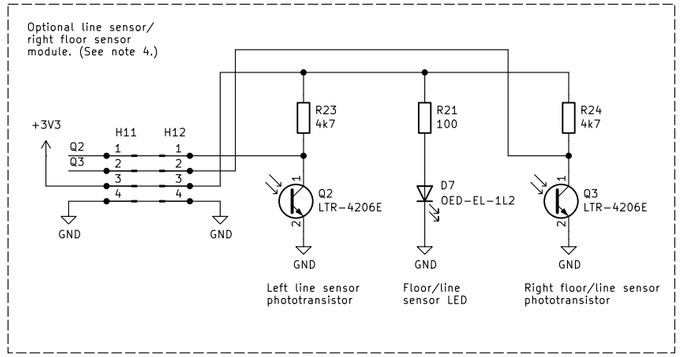

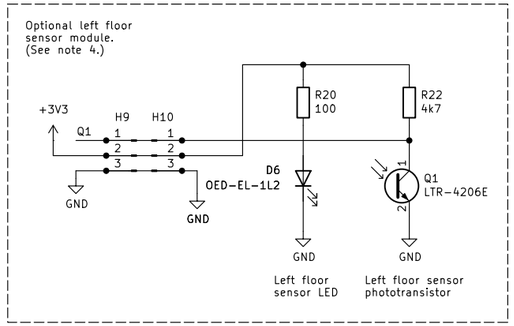

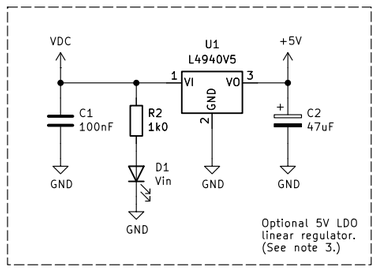

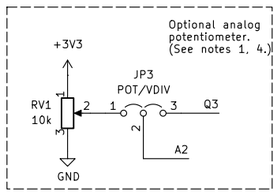

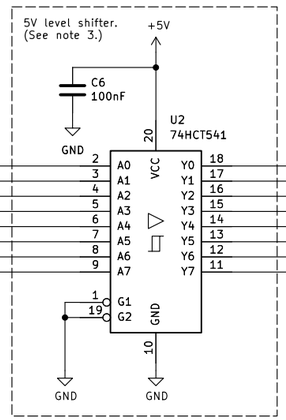

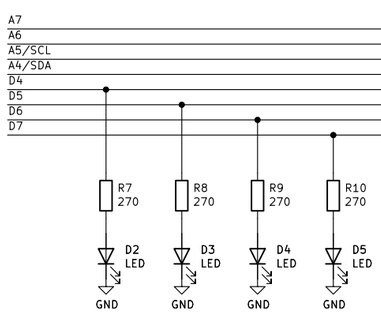

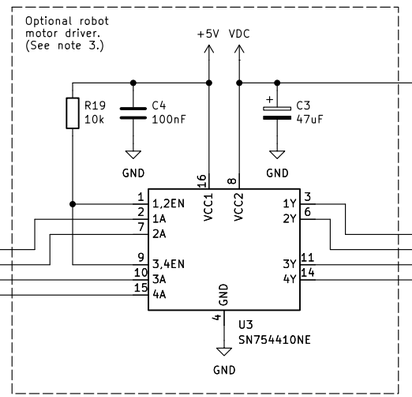

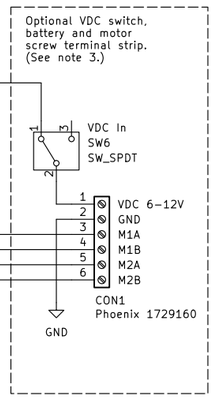

Notes:

1. BEAPER Nano can be built in a simplified Educational Starter configuration using only components not marked as optional. The analog input program shared in Introductory Programming Activity 5 requires one or more of the optional analog input devices to be installed.

2. Headers H1–H4 can be populated either with 3-pin headers or with 3-pin header sockets. H1–H4 can alternatively be bridged with a single 4-pin header socket to enable a 3.3V HC-SR04P SONAR distance sensing module to mount directly onto the BEAPER Nano circuit.

3. 5V is available to on-board circuits only when BEAPER Nano is powered through the VDC IN input of screw terminal strip CON1. U1 (5V regulator circuit) and U2 (level shifter IC) are required if using motor driver U3 or digital output headers H5–8.

4. Install the appropriate JP1–JP4 jumper headers to select between available analog input devices (either Enviro. (environmental) sensors Q4, U4, RV1, and RV2, or Robot sensors Q1, Q2, Q3, and the VDIV voltage divider).

5. As shown, voltage divider resistors R25 and R26 allow a VDC input range of 0 – 20.5V with resolutions of 20mV/bit (10-bit), or 5mV/bit (12 bit).

mirobo.tech

BEAPER (Beginner Electronics And Programming Educational Robot) for Arduino Nano ESP32

mirobo.tech BEAPER Nano 1		
File: BEAPER-Nano-101.kicad_sch		**Rev: 01**
Date: 2026-04-17	Size: B	Page: 1/1
KiCad E.D.A. 10.0.1	Sheet: Main	