Connect a push button switch to P3.4 and an 8Ω speaker to P1.0 as shown below. The 2N5307 is a Darlington transistor pair which has a current gain of $\beta > 2000$ and its collector current can be up to 1.2 amps. If you output a square wave on P1.0 at frequency $f_0$ you will hear a tone on the speaker with a base frequency $f_0$ plus odd harmonic overtones.

For this assignment write the assembly-code to output an A-note (about 440Hz) in response to the push button on P3.4.

Your assembly code must contain a subroutine which does the software time delay and a macro which output a bit to P1.0.

Do a demo of your program in class on the due date and turn in the following:
1. A cover sheet with your name, assignment number, and the date turned in.
2. A hard copy of your commented assembly-code