Breadboard and Testpoints

ECE 401 - Homework #5

Due: November 8th

ECE 401 Circuit Requirements

- Must operate off of 5VDC
- Must include at least one integrated circuit
- Must include at least one LED with Id = 10mA +/- 2mA
- Must include at least one NPN and one PNP transistor

Base current allows 100mA

- Power supply = 9V battery (mark +/- polarity)

use a LM7805 regulator to drop 9V to 5V

- Must have a reverse-polarity protection diode
- Must have a 1/4 Watt 1-Ohm resistor in series with the power supply

1. Build your circuit on a breadboard

- Power comes from a 9V battery
- Include a photo in your OneNote document

2. Take measurements to verify your circuit works

- Voltages
- Currents (usually calculated by measuring voltages)
- Frequencies
- Total current draw from the 9V battery
  - measure the voltage across the 1 Ohm resistor and compute current
- Include these measurements in your OneNote document
- Note where you these are recorded on your schematic
  - These are your test points for the PCB

3) Parts List

- Parts used in your breadboard
- Vendor & Vendor number
- Description
- Price