

Main equipment

1. Analog Discovery 2



2. Breadboard adapter for Analog Discovery (Digilent part 410-361)



3. Breadboard jumper wires kit rigid and flexible mix



4. Parts for Assignments as shown below (versions with DIP package for breadboards)
you can find the parts at various distributors among which Amazon, Digikey, Mouser, Arrow ...
For the passive components (capacitors and resistors) kits are highly recommended.

Assignments

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|---|-------|-----------|
| 1. Familiarization with equipment | 8/28 | no due |
| 2. RC filters and diodes (100pts) | 9/11 | due 9/17 |
| a. RC filter: 1x10k Ω resistor, 1x4.7nF capacitor | | |
| b. Diode: 1x100 Ω resistor, 1x1N4148 (or 1N4001) diode | | |
| 3. DC power supplies (200pts) | 9/18 | due 10/1 |
| a. 4x1N4148 (or 1N4001) diodes, 1x10 Ω , 1x470 Ω , 1x2k Ω resistor, 1x47 μ F capacitor | | |
| b. 1xLM317 (or LT1086), 2x200 Ω , 1x2k Ω resistors | | |
| 4. Digital gates (200 pts) | 10/2 | due 10/15 |
| a. 1xCD4007 CMOS array | | |
| b. 1x74LS00 NAND array | | |
| 5. Counters (100 pts) | 10/16 | due 10/22 |
| a. 2x74LS74, 1x74LS00, 1x74LS86 | | |
| 6. Operational amplifiers (100 pts) | 10/23 | due 10/29 |
| a. 1xOP27, 2x1k Ω resistor, 1x20k Ω resistors | | |
| 7. Field Effect Transistors (FETs) (200pts) | 10/30 | due 11/12 |
| a. 1xJ113, 1x100 Ω , 1x470 Ω , 2x100k Ω resistors, 1x100nF capacitor | | |
| 8. Bipolar Junction Transistors (BJTs) (200pts) | 11/13 | due 11/26 |
| a. 1x2N3904, 1x100 Ω , 10k Ω , 2k Ω , 200k Ω resistors, 1x100nF capacitor | | |
| 9. Monostables and Rectifiers (100 pts) | 11/27 | due 12/3 |
| a. 1x74LS123, 1xMCR100-6, 1x3.3k Ω , 10k Ω resistors, 2x1k Ω resistor, 2x100nF capacitor | | |