THE NATIONAL UNIVERSITY OF SINGAPORE

EE2007E – MICROPROCESSOR SYSTEMS

SEMESTER II, AY 2011/2012

MINI PROJECT 2

10 marks

OBJECTIVE: Making half of a serial cable

DESCRIPTION:

1. See video on soldering techniques in the Digital Lab website

2. Solder the wires onto a female RS-232C connector

3. The length of the wires should be *LONG ENOUGH TO CONNECT* a PC to another PC (about 0.6 m long)

4. The connector end is connected to the serial port of a PC, the other ends of the wires *SHOULD BE PROTECTED FROM SHORT CIRCUITS*, and are for signal verifications. The signals on those ends can be observed using an oscilloscope

NOTE: The other end of the cable will be completed for use in major projects where 2 PCs will be connected for data communications.

THINGS TO DO TO MAKE SURE THERE ARE NO HARDWARE ERRORS:

• Test the connections for conductivity: one end of the pin is tested for conductivity with the other end of the wire.

• Test the wires for short circuits: one end of the pin is tested for short with any ends of any other wires.

ASSESSMENT REQUIREMENTS:

1. Draw a flow chart.

2. Subsequently derive a short assembly program to observe and test the Control signals and Data signals– to be tested on a PC.

3. Present the above 2 items to your respective GA on your presentation day.

This is an individual project.

Please retain your serial cable for mini project 3.

The date of submission/presentation will be notified with the briefing of mini project 3. For Mini Project 2, you will be evaluated on the basis of your hardware and understanding of concepts.