CG2007 Microprocessor Systems Dept of ECE, NUS Singapore (AY 2010/2011 Semester II)

Deadline for submission – February 11, 2011 February 18, 2011

Mini Project – 1

This is an **individual** project. Read the following description of the problem statement carefully.

Consider a set of <u>pre-stored</u> **1-byte** <u>positive</u> integer elements in an array. Do the following.

- 1. Count the number of elements in your array and display them;
- 2. Identify and display all numbers <u>less than</u> a specific threshold number (you can set this threshold as you wish). If there are none, display a message;
- 3. Identify EVEN numbers, count them and compute their **average**. Display your result;
- 4. Identify all *prime numbers* in your array and display them;

Requirements:

1. Entire code should be properly documented; Description of variables used must be explicitly shown;

- 2. Clearly identify the Data Segment and Code Segment portions;
- 3. Each sub-problem above should be identified separately and your displayed results must have sufficient clarity;
- 4. Test your code with a variety of data sets, threshold values, etc.
- 5. Deadline for submission **February 18, 2011**; Email your **SOFT COPY** report **to your respective** GAs / Lab Demonstrators; Clearly print your code and the results in a systematic fashion; Print your results for each data set you had assumed;

Note: If required, you may be called to demonstrate your code by running and performing the experiments. Copying should be **strictly** avoided. If any report is found copied, then the candidate must face the disciplinary action from the Dept/University.