

First: _____ Last: _____

Scoring

Your grade will be based both on the numerical results returned by your program and on your programming style. In particular, write code that is easy to understand, easy to debug, easy to change. Please employ good labels, pretty structure, and good comments.

Program style, rtf file printed by TA		
	labels	
	pretty structure	
	comments, name on RTF	
Performance score, Run by TA at the checkout		S=
total		

I promise to follow these rules

This is a closed book exam. You must develop the software solution using the **TExaS** simulator. You have 55 minutes, so allocate your time accordingly. You are allowed to bring only some pencils (no books, laptops, cell phones, hats, disks, CDs, or notes). You will have to leave other materials up front. Each person works alone (no groups). You have full access to **TExaS**, with all the **TExaS** examples and the **TExaS** help. You may use the Window's calculator. You sit in front of a computer and edit/assemble/run/debug the programming assignment. You do not have access the Freescale manuals, just the help system in **TExaS**. You may not take this paper, scratch paper, or rough drafts out of the room. You may not access your network drive or the Internet. You are not allowed to discuss this exam with other EE319K students until Thursday.

The following activities occurring during the exam will be considered scholastic dishonesty:

- 0) reading, writing or viewing any file outside of test files on the desktop
- 1) running any program from the PC other than **TExaS** or the Windows calculator,
- 2) communicating to other students by any means about this exam until Thursday,
- 3) using material/equipment other than a pen/pencil.

Students caught cheating will be turned to the Dean of Students.

Signed: _____ October 2009

Procedure

First, you will log onto the computer and download files from the web as instructed by the TAs. Please put the three starter files called **Exam2x.rtf** **Exam2x.uc** **Exam2x.io** into the **temp** folder on drive D. You are not allowed to archive this exam. Within **TExaS** open these files, put your name on the first comment line. Before writing any code, please assemble and run the system. You should get output like the figure on the right (but a much lower score). Each time you assemble, **TExaS** will create a backup version of your program. If you wish to roll back to a previous version, simply open one of the backup versions. If you do roll back, I suggest you perform a **SaveAs**, so a new sequence of backup files will be started.

My main program will call each of your subroutines five times and will give your solution a performance score of 0 to 100. *You should not modify my main program or my example data.* When you have written your subroutines, you should run my main program, which will output the results to the **TheCRT.rtf** window. You are allowed to create additional global variables. After you are finished, raise you hand and wait for a TA. The TA will direct you how and when to print your source code. You will run your program in front of the TA, who will record your performance score on your exam paper. Please sort all materials in this order: 1) this paper, 2) software source code printout, and 3) all scratch work. These papers will be stapled together and turned in. The scoring page is the only work that will be returned to you.

Part a) Write the first assembly language subroutine.

Part b) Write the second assembly language subroutine.

Part c) Write the third assembly language subroutine.

Your subroutines should work for all cases shown in the starter file. *Handle the simple cases first and the special cases last.*

Place your global variable between these two spots

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;****PUT ADDITIONAL GLOBAL VARIABLES YOU NEED HERE*****

;****END OF GLOBAL VARIABLES *****

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Place your three subroutines between these two spots

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;****PUT YOUR SUBROUTINES HERE*****

;****DO NOT CHANGE BELOW THIS POINT*****

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