# 

July 2018

### 1. Objectives

In this lab, you wi

- AVR asse
- basic ass



You will be working with Counait bartles trulted lees is es. When you arrive at the laboratory for the first time, please sign in with your partner.

## 3. Examining the sign mental Project Exam Help

The host environment is a standard personal computer running the Windows operating system. Take a note print desktoplicing The Cord include AVR Stripp which you will be using to edit your program, assemble it into the executable file and debug it. Another icon is the AVRDOC folder, which contains AVR Instruction Set Manual, AVR Instruction Set Summary and ATmega Reference Manual. Those documents are also available on the course website. You are encoursed to the series of th

## 4. Save Your Work https://tutorcs.com

The computers in the lab are also used by other students. So when you finish your lab, please save all your work to your USB memory and DELETE all files associated with your lab if you do not want other students to use your files.

### 5. Programming Style

The general practice, when you write an assembly program, is to maintain the readability and consistency of your code. For this reason, you are encouraged to adopt the following rules, especially for this course:

- Starting each source code file with a heading that includes:
  - o your name so that it is easy to see who is responsible for the file.
  - o the date of last modification and a version number, and
  - the description of what the program does, possibly with a pseudocode for a high level abstraction.

- Including appropriate comments that explain the "why", not just the "how" of the program through out the source copie.
- Using a sensible layout for your code -- to make it easy to see the code structures, instructions and any labels.

#### 6. Tasks

6.1 Task 1 (for V ) (1) (1) (1) (1)

Manually converted by gcd.c below (i.e. calculating the greatest common divisor (Later Later Lat

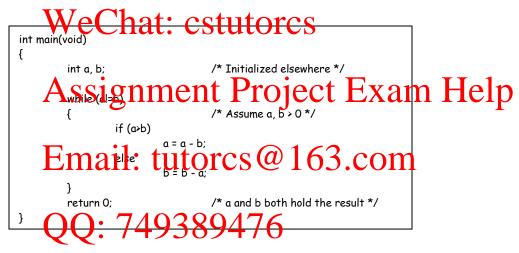


Figure 1: Program gcd.c

Assign register rate Se/ total and Inhe variable b. Note, do not initialize these registers within your code. (You should be able to initialize these values in AVR Studio, refer to lab0).

Assemble and run your program in AVR Studio and show your working program to the lab tutor. Remember to save and delete your work before you leave the laboratory.

#### 6.2 Task 2 (for Week 3, due in Week 4)

Write an AVR assembly program that performs the following function

$$sum = \sum_{i=1}^{n} a^{i} ,$$

where n and a are 8-bit unsigned integers and sum is 16 bits. Try to minimize the number of registers used.

Use macro to increase the readability of your program.

Assemble and run your program in AVR Studio and show your working program to the lab tutor. 程序代写代做 CS编程辅导

NOTE:

Each task is work to read. Up the state of the sufficient comment of t

Please have your work marked in your lab class of the due week.

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