edX (https://www.edx.org)

UTAustinX: UT.6.01x Embedded Systems - Shape the World

KarenWest (/dashboard) ▼

Courseware (/courses/UTAustinX/UT.6.01x/1T2014/courseware) **Course Info (/courses/UTAustinX/UT.6.01x/1T2014/info)**

Discussion (/courses/UTAustinX/UT.6.01x/1T2014/discussion/forum) **Progress (/courses/UTAustinX/UT.6.01x/1T2014/progress)**

Questions (/courses/UTAustinX/UT.6.01x/1T2014/a3da417940af4ec49a9c02b3eae3460b/)

Syllabus (/courses/UTAustinX/UT.6.01x/1T2014/a827a8b3cc204927b6efaa49580170d1/)

Things to think about but NOT implement in your lab:

There are many ways to test if two switches are pressed. For example, assume Port E is an input connected to two positive logic switches on PE3 and PE1, and we wish to execute SOS if switches are pressed. The first way involves an **&&**. The second method involves **&**, and the third way uses **==**. Why does the first use **&&** and the second use **&**? Which do you like? Does the use of the variables make it easier to debug?

```
// first way
In=GPIO_PORTE_DATA_R;
S1 = In&0x08;
S2 = In&0x02;
if(S1&&S2){
  FlashSOS();
}
//*******************
// second way
In=GPIO_PORTE_DATA_R;
S1 = (In&0x08)>>2;
S2 = In&0x02;
if(S1&S2){
  FlashSOS();
}
//*******************
// third way
In=GPIO_PORTE_DATA_R;
if((In&0x0A)==0x0A){
  FlashSOS();
}
```

Help

Portions of this chapter were reprinted with approval from Embedded Systems: Introduction to ARM Cortex-M Microcontrollers, 2013, ISBN: 978-1477508992. For more information on this book, see **http://users.ece.utexas.edu/~valvano/arm/outline1.htm** (http://users.ece.utexas.edu/~valvano/arm/outline1.htm)

Specific reading relevant to Chapter 7:
Book Volume 1 Sections 2.3, 2.4, 2.5, Chapter 5

If you are having trouble understanding the C code in this book , we suggest you read the available free sections of on the **Zyante** site

1) Go to http://utedxfall13.zyante.com (http://utedxfall13.zyante.com)

2) Click register in the upper right (do not click “Subscribe for full access”)

3) Registering is free but subsequent visits to this site you will **Login**.

Reading Zyante is optional and not a formal part of this class.

About (https://www.edx.org/about-us) Jobs (https://www.edx.org/jobs)
Press (https://www.edx.org/press) FAQ (https://www.edx.org/student-faq)
Contact (https://www.edx.org/contact)

EdX is a non-profit created by founding partners Harvard and MIT whose mission is to bring the best of higher education to students of all ages anywhere in the world, wherever there is Internet access. EdX's free online MOOCs are interactive and subjects include computer science, public health, and artificial intelligence.

Help

(http://www.meetup.com/edX-Global-Community/)

(http://www.facebook.com/EdxOnline)

(https://twitter.com/edXOnline)

(https://plus.google.com/108235383044095082735/posts)

(http://youtube.com/user/edxonline)

Terms of Service and Honor Code -
Privacy Policy (https://www.edx.org/edx-privacy-policy)