**COURSEWORK ASSIGNMENT UNIVERSITY OF EAST ANGLIA**

**School of Computing Sciences**

**UNIT:** CMP-5045B

**ASSIGNMENT TITLE:** User Interfaces using a GLCD touchscreen (Formative)

**DATE SET : Week 4**

**DATE & TIME OF DEMO : Week 9 (26 Apr.)**

**RETURN DATE : Week 10 (3 May)**

**ASSIGNMENT VALUE : Formative**

**SET BY : Edwin SIGNED:**

**CHECKED BY : Edwin SIGNED:**

1. **Aim:**

The summative assignment (to be set in a few weeks) will challenge you to develop an embedded application of your choice. Your application will be limited by the resources available on the STM32F7G Discovery Board.

In week 12 (**17 May**) you will be assessed on your attempt to develop an interesting embedded application using an RTOS. One component of this will comprise a user interface. This assignment provides an opportunity to get some practice and feedback building the user interface and testing it before porting to the RTOS.

1. **Learning outcomes:**

* Be competent in basic use of C for programming embedded systems.
* To appreciate the challenges and benefits of developing user interface using a GLCD touchscreen.
* Understand the role of development platforms and cross compilers in the development chain.

1. **Description of assignment:**

**Working in pairs**, develop the user interface for an application of your choice (which when extended will form part of assignment 2).

1. **Assessment criteria:**

The assessment criteria will be based on two components:

* Practical demonstration (5 min) of the user interface (flow chart) (50%).
* Presentation: A short (5 min) PowerPoint presentation should describe the software design particularly focusing on application ideas and peripherals. (50%)

1. **Handing in procedure:**

Each group will give a 5 min ppt presentation for their application ideas and 5 min User Interface explanation based on flow chart in the lab session on **26 Apr** (the ppt slides and UI flow chart pdf should be submitted to <https://www.dropbox.com/request/lpLmPbT7fOsVMhrrj28d> by 15:00 23 Mar.)

The assignment is marked by bench demonstration only. Please register your group members and time on the online form by **7 Apr.** in here: <https://docs.google.com/spreadsheets/d/1NvceZuAPRDyOB0Iu-9XrkEBVPG_E2_czc03WHQg6wWE/edit#gid=0>

If you have medical or other problems you can seek extensions to coursework deadlines. However, it is essential you obtain proper documentation in such cases (i.e. a medical certificate), to be handed in to SCI HUB at the time of the difficulty.



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|  | CMP-5045B  Assignment 1 Bench Demo (forms may be photocopied). | | |
|  | Names:  Cameron Shipman, Andrew Sturdy | | |
| Part a) User Interface 50% | | Mark |  |
| Easy to use 20% | |  | 10 |
| Appropriate font size 15% | |  | 6 |
| Color 15% | |  | 8 |
| Part b) Presentation 50% | |  |  |
| Novelty of the System 20% | |  | 8 |
| Functionality of the System 20% | |  | 10 |
| Ability to answer questions 10% | |  | 6 |
| Overall Mark (100%) | |  |  |
| Signed: Edwin Ren  Date: 30 April 2022  (E. Ren) | | | |
| Comments:  You may consider the following comments.   * More physical interfaces could be added to the UI design. * The font size in GUI is too small. * Try to make the GUI colourful, like highlighting the significant values. * The work can be more ambitious, try to find a way to give feedback to the player if you want to make a clicking/reaction game or consider a rhythm game. | | | |