Microcontroller Based Systems (CCE2014)
Design Brief

Prof. Johann A. Briffa

Group Number: 2

Description	*Grade*
Problem concept, its description and originality: [10%]	
The problem concept is very well thought through and the idea is interesting and/or original. It is described coherently and concisely. The concept is really promising as a product.	Help 75%
Engagement with requirements and realisation within the ARM MDK: [30%]	
Requirements are addressed well and a detailed connection made to the ARM MDK with only minor oversights and shortcomings.	Help 70%
Initial planning for implementation: [30%]	
An adequate initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with some oversights and shortcomings.	Help 60%
Organisation and management planning: [20%]	
An adequate approach to task identification and time planning with some understanding and presentatio of task interdependencies, but with minor flaws.	Help 55%
Layout of report: [10%]	
A professional layout and organisation of material on the basis of the provided template. Does not exceed the maximum length.	Help 90%

Overall Grade: 67%

Briefly justify the overall grade, and give additional feedback.

PDF should not be committed, since this can be rebuilt. Persistent storage can use NVRAM, probably easier than SD card. Similar to the goal detection, timer can also be handled using interrupts. Good idea going for a game - such problems tend to be very interactive and interesting. Requirements considered in detail, but there is no consideration (yet) of how inputs/outputs will connect to the ARM platform, to ensure feasibility. Initial implementation plan looks sensible, with use of interrupts to handle goal detection. However, the proximity sensor has not been identified yet, this should be a priority. Also, timer can be handled more efficiently using interrupts. Software architecture not considered yet. Task identification is good, but there is no consideration of dependencies yet. Also there is no Gantt chart and no estimates of how long each task will take.

Instructions

The group examiner should complete this assessment. When complete, this is to be submitted on the following folder on SVN:

`https://username@cce2014-ict.research.um.edu.mt/svn/CCE2014/2018-2019/assessment/designbrief/`

The filename should be `designbrief-XX.pdf`, where `XX` is the two-digit group number. *Please follow the naming convention strictly as a script will be used to collect grades.* All grades are to be considered provisional until Board of Examiners approval.

Marking Criteria

Grade *Description*

Problem concept, its description and originality: [10%]

0%–44%: An insignificant or limited attempt at presenting the problem concept, or the presented concept shows a misunderstanding of the task. The core idea is either not developed or difficult to understand and misrepresents the task.

45%–49%: A problem concept has been presented, but it lacks thoroughness and coherence. The idea lacks originality and consistency. Its description has a fair amount of omissions and/or inconsistencies so that the idea is hard to understand.

50%–54%: The problem concept is thought through but has significant shortcomings. The idea is interesting but generally lacks original elements. Its is described appropriately but with significant omissions and/or inconsistencies.

55%–64%: The problem concept is thought through but has some shortcomings. The idea is interesting but mostly lacks original elements. Its is described appropriately but with some omissions and/or inconsistencies.

65%–69%: The problem concept is well thought through and the idea is interesting with some original elements. Its is mainly described coherently and concisely with only minor shortcomings. The concept could be promising as a product.

70%–74%: The problem concept is well thought through and the idea is interesting with some original elements. Its is described coherently and concisely. The concept could be promising as a product.

75%–79%: The problem concept is very well thought through and the idea is interesting and/or original. It is described coherently and concisely. The concept is really promising as a product.

80%–94%: The problem concept is excellent and the idea is convincing and original. It is described coherently and concisely. The game concept is very promising as a product.

95%–100%: The problem concept is exceptional and the idea is convincing and original. It is described coherently and concisely. The game concept is very promising as a product.

Engagement with requirements and realisation within the ARM MDK: [30%]

0%–44%: Insignificant or inappropriate attempt to address requirements, or some requirements are addressed but with limited scope and with significant shortcomings and oversights. No significant awareness of connection to the ARM MDK.

45%–49%: Some requirements are addressed but with limited scope and with some significant shortcomings and oversights. The connection between the requirements and the ARM MDK is poor.

50%–54%: Requirements are addressed adequately and a connection made to the ARM MDK but with significant shortcomings and oversights.

55%–64%: Requirements are addressed adequately and a connection made to the ARM MDK but with some shortcomings and oversights.

65%–69%: Requirements are addressed adequately and a detailed connection made to the ARM MDK with some limited oversights and shortcomings.

70%–74%: Requirements are addressed well and a detailed connection made to the ARM MDK with only minor oversights and shortcomings.

75%–79%: Requirements are addressed well, concisely and comprehensively with an informed and detailed connection made to the ARM MDK with only minor oversights and shortcomings.

80%–94%: Requirements are addressed very well, concisely and comprehensively with a thorough and detailed connection made to the ARM MDK.

95%–100%: Requirements are addressed very well, concisely and comprehensively with a thorough and detailed connection made to the ARM MDK.

Initial planning for implementation: [30%]

0%–44%: An insignificant or inadequate initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with severe omissions and flaws and limited awareness of the implementation.

45%–49%: A limited initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with a few severe oversights and shortcomings.

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Grade	*Description*
50%–54%:	A barely adequate initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with some significant oversights and shortcomings.
55%–64%:	An adequate initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with some oversights and shortcomings.
65%–69%:	A good professional initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with only some oversights and shortcomings.
70%–74%:	A good professional initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with only minor oversights and shortcomings.
75%–79%:	A thorough professional initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation with only minor oversights and shortcomings.
80%–94%:	An excellent and very thorough professional initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation.
95%–100%:	An exceptional and very thorough professional initial implementation plan regarding user interface, hardware design and object-oriented structure of the implementation.

Organisation and management planning: [20%]

0%–44%:	An insufficient approach to task identification and time planning with minimal understanding and presentation of task interdependencies and with severe flaws or omissions.
45%–49%:	A limited approach to task identification and time planning with restricted understanding and presentation of task interdependencies and with severe flaws.
50%–54%:	An adequate approach to task identification and time planning with some understanding and presentation of task interdependencies, but with significant flaws.
55%–64%:	An adequate approach to task identification and time planning with some understanding and presentation of task interdependencies, but with minor flaws.
65%–69%:	A good approach to task identification and time planning with appropriate presentation of task interdependencies and with only some flaws.
70%–74%:	A good approach to task identification and time planning with appropriate presentation of task interdependencies and with only minor flaws.
75%–79%:	A thorough approach of near professional standard to task identification and time planning with a professional understanding and presentation of task interdependencies and only a few minor flaws.
80%–94%:	An excellent and very thorough approach of professional standard to task identification and time planning with a professional understanding and presentation of task interdependencies.
95%–100%:	An exceptional and very thorough approach of professional standard to task identification and time planning with a professional understanding and presentation of task interdependencies.

Layout of report: [10%]

0%–44%:	An unorganised layout and organisation of material with significant design and readability errors. The template has been improperly used or not used at all.
45%–49%:	A layout and organisation of material based on the provided template with severe shortcomings. The template has been used improperly.
50%–54%:	An adequate layout and organisation of material based on the provided template with significant shortcomings. May exceed the maximum length.
55%–64%:	An adequate layout and organisation of material based on the provided template with some shortcomings. May exceed the maximum length.
65%–69%:	A good layout and organisation of material on the basis of the provided template with some shortcomings. Does not exceed the maximum length.
70%–74%:	A good layout and organisation of material on the basis of the provided template with only minor shortcomings. Does not exceed the maximum length.
75%–79%:	A very good layout and organisation of material on the basis of the provided template with a few minor shortcomings. Does not exceed the maximum length.
80%–94%:	A professional layout and organisation of material on the basis of the provided template. Does not exceed the maximum length.
95%–100%:	A professional layout and organisation of material on the basis of the provided template. Does not exceed the maximum length.