Assignment Brief: Comp3402 Nature of Computing 2023-24 Sem 1&2

Assignment 3 (Part2)	Position Paper 3 (Part 2)
Word Limit or equivalent (e.g. time)	No word limit. Indicative time 14 hours
Weighting	15%
Learning Outcomes Assessed	(6) Critically appraise the principles of a modern operating system.
Submission date	3rd May 2024 15:00
Feedback date	20 days following the respective submission date
Module Leader	Dr. Colin Price c.price@worc.ac.uk
Verified by	Bradley Carwardine

If anything about this assignment is not clear to you, please contact your module leader.

What do I need to do to make a success of this assignment?

You should write a position paper stating your position on the following statement,

"The operating system is the most vital software that a computer system executes."

You draw on your worksheet material and focus on explaining how features of the operating system work, supported by a range of examples.

How should I present my work?

Your paper should contain three sections: (1) A short **introduction / abstract** where you tell the reader what to expect reading your paper, (2) The **main body** of your paper, (3) A conclusion where you **state your position**.

The main body of your paper should contain two sections. The first section is based on investigations using Arduino with a RTOS **and** parallel processing using OpenMP. The second section has two options, either application of RTOS **or** OpenMP to a significant problem, **or** a research-based option. The research option requires citation of journal articles.

Section 1	Section 2	
	Option 1	**Option 2**
You will investigate some features of FreeRTOS on an Arduino. **AND** You will investigate some features of OpenMP running in Visual Studio C.	You will apply FreeRTOS to create a sophisticated robot control architecture running on the Parallax Robot. **OR** You will apply OpenMP to a challenging computational problem	Review the literature related to Super Computers and discuss either their *architectures* **OR** their *applications*.

You do not need to cite any journal articles for this paper (except for the research option)

How can I obtain guidance on my assignment?	You can show your tutor your work in progress at any time no later than one week before the submission deadline to enable you to review and address feedback provided to develop your work. The assignment briefing will be given w/c 8th April 2024. You may ask for any additional support or guidance in class or via email c.price@worc.ac.uk

How and when do I hand my assignment in?	Your work must be word-processed/typed and should clearly show your student number. You should submit your work by the 3pm deadlines indicated above. You should submit your work to Blackboard which is available via MyDay. **You are required to keep a copy of work handed in**. See the separate **Assignment Support Information** document on Blackboard for help on how to submit or what to do if you are having trouble submitting your assignment.

How will my assignment be marked?	Specific marking criteria for your assignment is provided in the Grading Matrix within this document. You are strongly advised to check your completed work against the Grading Matrix to ensure have completed all areas required before you submit it. You should also ensure you adhere to the word limit / word count stated in your assessment brief document, details of which can be found in the University's Assessment Policy http://www.worc.ac.uk/aqu/documents/AssessmentPolicy.pdf

L6 Grading Matrix for Comp3402 Position Paper 3 (Part 2)

This matrix captures the assessment criteria for this part of the coursework.

Student Name/Number:		**Assignment No: 3**	**Weighting: 15%**
Module Code:	Comp3402	**Assignment Title: PP3 (part2)**	
Module Title:	Nature of Computing	**Semester: 1&2**	
Learning Outcomes being assessed: ***LO6.*** Critically appraise the principles of a modern operating system.			

To best understand this matrix, start by reading the 'baseline' grade C

	Knowledge and understanding	**Autonomy in Learning**		**Communication**
		Option 1	**Option 2**	
	Investigations into FreeRTOS and OpenMP	**Application of either FreeRTOS *OR* OpenMP to a sophisticated application**	**Research into the architectures *OR* applications of Supercomputers**	**Well-written Paper**
	45	**45**		**10**
A	Investigation and evaluation are both comprehensive **AND** detailed.	Detailed presentation **AND** critical evaluation	Detailed material **AND** critical evaluation.	Position is coherent and persuasive.
B	Comprehensive **OR** detailed investigation and evaluation.	Presentation is detailed	Material is detailed	Position is coherent.
C	Investigation and evaluation of **one** feature of FreeRTOS **and one** feature of OpenMP.	Correct solution to problem is presented.	Material presented has been carefully selected.	Statement of position in clear language.
D	Investigation and evaluation, does not include both FreeRTOS and OpenMP	Attempt at a solution, though there may be errors	Some material presented, though may be arbitrary	Statement of position is too short or unclear.
F	Little or no attempt, or work contains errors.	Little or no attempt at a solution.	Little or no attempt to present material.	Little or no statement of position.

My approach to supporting and assessing SPaG on this assignment will appear on the Module Webpage and will be explained during the introductory session w/c 25th September 2023.

RESULTS ARE PROVISIONAL UNTIL AGREED BY THE BOARD OF EXAMINERS