Assignment Brief: Comp3402 Nature of Computing 2022-23

Assignment 1 (Part2)	Position Paper 1 (Part 2)
Word Limit or equivalent (e.g. time)	No word limit. Indicative time 14 hours
Weighting	20%
Learning Outcomes Assessed	(3) Critically assess how an understanding of the natural world helps us create digital worlds through programming.
Submission date	21st November 2022, 15:00
Feedback date	20 days following the respective submission date
Module Leader	Dr. Colin Price c.price@worc.ac.uk
Verified by	Dr. Marc Price

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 will write a position paper stating your position on the following statement.

"Programmed simulations can help us understand the harvesting of wind energy"

There are two main sections to this paper. Both sections carry equal weights. Section 1 has an option for those who want to code in C++. **Coding is not mandatory for this paper.**

Section 1		Section 2
Option 1	**Option 2**	
You will conduct simulations of a single wind turbine and analyze the captured data following worksheet guidance. There is no coding involved here.	This is for Coders. You will adapt the C++ code provided following worksheet guidance. You will then conduct limited simulations and analyze your data following worksheet guidance. Note that you will have the opportunity to continue developing your understanding of C++ in PP3 (part 1) after the Christmas Vac.	You will conduct investigations into air flow around a single turbine. Then you will investigate how the air flow around multiple turbines works, leading to an understanding of wind-farm design. **---- OR ---** You will be able to conduct independent study, looking at wind energy in the broad context of all approaches to energy production and supply. Articles must be cited.

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 (i) observations, recorded as screen shots, tables of numbers or graphs, (ii) explanations related to your observations. If you choose the independent study option for Section 2, then you must cite journal articles.

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 on 17th October 2022. 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 1 (Part 2)

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

Student Number/Name:	**Academic Year and Semester:** *2022-23 AS*	**Learning Outcomes:** *(3) Critically assess how an understanding of the natural world helps us create digital worlds through programming.*
Module Code / Title: *Comp3402 Nature of Computing*	**Assignment No/Weighting:** *Ass 1 (part 2). Weighting 20%*	
	Assessment Title: *Position Paper 1 (Part 2)*	

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

	Knowledge and understanding		**Autonomy in Learning**		**Communication**
	Option 1	**Option 2**	**Option 1**	**Option 2**	
	Investigation and Data Analysis	**Coders: Coding, Shorter Investigation and Analysis**	**Investigations of Air Flow around single turbines and within a wind farm**	**Research into the place of Wind Energy in our future energy needs.**	**Well-written Paper**
	45		**45**		**10**
A	Investigation and analysis are both comprehensive **AND** detailed.	Detailed annotated code **AND** comprehensive analysis of data.	Investigation and analysis are both comprehensive **AND** detailed.	Comprehensive **AND** detailed discussion of Wind Energy in our future needs.	Position is coherent **AND** persuasive.
B	Comprehensive **OR** detailed investigation and analysis	Detailed annotated code **OR** comprehensive analysis of data.	Comprehensive **OR** detailed investigation and analysis	Comprehensive **OR** detailed discussion of Wind Energy in our future needs.	Position is coherent.
C	Investigation and Analysis of one scenario correctly discussed	Code correctly implements the associated mathematical model. Supporting investigation and analysis.	Investigation and Analysis of one scenario correctly discussed	Discussion of the place of Wind Energy in our future needs.	Statement of position in clear language.
D	Attempt at Investigation and Analysis, though there may be some errors.	Attempt at coding, though this may not correctly support the mathematical model.	Attempt at Investigation and Analysis, though there may be some errors.	Attempt at a discussion, though there may be factual errors, or not enough material presented.	Statement of position is too short. Spelling and grammar may contain errors.
F-	Little or no attempt at the Investigation.	Code presented is non-functional	Little or no attempt at the Investigation.	Little or no attempt at a discussion.	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 19th September 2022.

Feedback on your assignment.

Please review this feedback and use it to develop your work in your next assignment in this and your other modules. If anything is unclear, please ask the marker.

Aspects done well and why:			
Aspects for improvement and why:			
How successful completion of this assignment helps your employability and achievement of graduate attributes:			
See module outline for details of: (i) Reflective and resilient lifelong learning, (ii) Problem solving, (iii) Teamwork and effective communication, (iv) Digital citizenship.			
Grade awarded:		**Marker: Colin Price**	**Moderator*: Marc Price**

** This person is responsible for moderating a sample of student work for this module. Your work may, or may not, have been included in this sample.*

□ I do not want my work to be used anonymously to help future students

RESULTS ARE PROVISIONAL UNTIL AGREED BY THE BOARD OF EXAMINERS