Assignment Brief: Comp3402 Nature of Computing 2022-23

Assignment 3 (Part1)	Position Paper 3 (Part 1)
Word Limit or equivalent (e.g. time)	No word limit. Indicative time 14 hours
Weighting	15%
Learning Outcomes Assessed	(2) Critically analyse important contemporary applications of computers.
Submission date	'Early-Bird' 20th March 2023 15:00 'Official' 24th April 2023 15:00
Feedback date	20 working days following the respective submission date
Module Leader	Dr. Colin Price c.price@worc.ac.uk
Verified by	Andrew Tomlinson

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

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 13th February 2023. Selection of options will be made in class on 12th December 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 Matrices within this document. Each mini-project has its own Grading Matrix, see below. You are strongly advised to check your completed work against the Grading Matrix to ensure you 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

Please read the sections appropriate to your chosen mini-project. You are expected collaborate, and perhaps share data collection amongst the team. You are allowed to share data, code, photos, movie clips, but your paper must be in your own words.

What do I need to do to make a success of this assignment?	**WeeBee Engine (Story-Writing-Coding)** You need to create some assets (actors, props, scenery) and then use these to code a short story (must have beginning, middle and end). You may choose to work on the Science-Fiction theme provided, or to develop your own theme. You may not make use of any images from the Internet which could lead to copyright infringement.

How should I present my work?	A good way of organizing your paper would be in the following sections
	
	• Abstract, perhaps a single paragraph where you outline (i) what you did and (ii) what you achieved.
	• Body of your paper. This could take the form of a journal / diary. Include
	  ○ Images of the assets you created.
	  ○ Explanation of how the assets work well together.
	  ○ Discussion of any theoretical approach you used, e.g., Embodied Cognition.
	  ○ Short story, presented in English and linked to the lines of code.
	• Conclusion where you state any limitations you encountered, and also suggestions for future work.
	
	In addition, you will supply
	
	• Your assets, in the engine **data** folder and your zipped **code**. Do not upload the entire WeeBee Engine!
	• Your Learning Conversation. Various approaches will be discussed during the briefing session.

	WeeBee Engine Story-Writing-Coding		
	Knowledge and Understanding	Autonomy in Learning	Communication
Grade	Creativity – Story with Code	Creativity - Assets	Learning Conversation
	80%		20%
A	Story Quality shows a high degree of novelty, inspiration or creativity. Story and code are closely mapped onto each other.	Assets designed using a clear theoretical approach, e.g. the theory of Embodied Cognition in mind.	The conversation shows shared thinking **AND** exploratory talk
B		Coherent assets with justification of your design principles.	The conversation shows shared thinking **OR** exploratory talk
C	Recognizable story with beginning, middle and end related to code.	Assets created appear mutually coherent.	A Learning Conversation is presented
D	Recognizable story with attempt to relate to code.	Assets created but are not coherent.	Attempt to produce a Learning Conversation
Fails	Little or no attempt at a story. No attempt to relate to code.	Little or no attempt to create assets	Little or no attempt to produce a conversation.

What do I need to do to make a success of this assignment?	**GoverPod, Pedestrian Circulation, Systolic Array Investigations.** You need to plan and conduct a range of investigations on your chosen field. You will subject your data to analysis and draw suitable conclusions.

How should I present my work?	A good way of organizing your paper would be in the following sections:
	
	• Abstract, perhaps a single paragraph where you outline (i) what you did and (ii) what you achieved.
	• Body of your report. This will probably have a short section for each investigation you performed. In each section
	  ○ Tell me what parameter you varied and what data you collected.
	  ○ Tables of data and graphs, e.g., showing how something varied with time.
	  ○ Investigation summary. Could be a graph pulling loads of investigation results together. Should have a conclusion for the section.
	  ○ There should be some justification for your investigation. This could be from an initial plan you created, or one investigation could follow on from the previous.
	• Conclusion where you state any limitations you encountered, and also suggestions for future work.
	
	In addition, you will supply,
	• Your Learning Conversation. Various approaches will be discussed during the briefing session.

Hexapod, Pedestrian Circulation, Systolic Array Investigations			
	Knowledge and Understanding	Autonomy in Learning	Communication
Grade	Investigation Planning	Investigation – Data Collection and Analysis	Learning Conversation
		80%	20%
A	Evidence of critical thought in planning.	Data subjected to critical and detailed analysis leading to persuasive conclusions.	The conversation shows shared thinking **AND** exploratory talk
B	Investigations are clearly coherent and appropriate for the scenario.	Data collected is presented and analysed in detail leading to strong conclusions.	The conversation shows shared thinking **OR** exploratory talk.
C	Evidence of initial plan or justification for Investigation.	Data collected and analysed leading to meaningful conclusion.	A Learning Conversation is presented
D	Attempt at planning. Investigations may be somewhat arbitrary with little justification	Data collected. Attempt at analysis though this may be only partially correct. Attempt at conclusions though these may be only partially correct.	Attempt to produce a Learning Conversation
Fails	Little or no evidence of planning	Little or no attempt at data collection, analysis and forming conclusions.	Little or no attempt to produce a conversation.

What do I need to do to make a success of this assignment?	**Harry the Robot with Vision** You need to learn how to use the HuskyLens in combination with robot movement. Then you will set yourselves a challenge to be solved using Robot Vision

How should I present my work?	A good way of organizing your paper would be in the following sections:
	
	• Abstract, perhaps a single paragraph where you outline (i) what you did and (ii) what you achieved.
	• Body of your report. This will probably have two sections:
	  ○ Section 1 where you explain your work getting Harry to perform various movements.
	  ○ Section 2 (the main section) where you state your challenge and explain how you approached solving it. You may have several attempts at the solution, please include details of any failures are well as successes.
	• Conclusion where you state any limitations you encountered, and also suggestions for future work.
	
	In addition, you will supply,
	• Your Learning Conversation. Various approaches will be discussed during the briefing session.

Computer Vision with Harry the Robot			
	Knowledge and Understanding	**Autonomy in Learning**	**Communication**
Grade	**Coding**	**Investigation: Plan Data Collection and Analysis**	**Learning Conversation**
		80%	**20%**
A	Comprehensive, functional and well-structured code.	Clear evidence of critical thinking in solving a sophisticated challenge.	The conversation shows shared thinking **AND** exploratory talk
B	Code is functional and well-structured.	Successful movement investigations. Challenge is quite demanding, is planned and solved.	The conversation shows shared thinking **OR** exploratory talk.
C	Clearly annotated code which functions to achieve your goals.	Movement investigations are successful. Straightforward challenge planned and solved.	A Learning Conversation is presented
D	Attempt to annotate code. Partially functional code.	Attempt at solving a straightforward challenge with some aspects of a plan. Partial solution obtained. Attempt at movement investigations	Attempt to produce a Learning Conversation
Fails	Little or no attempt to write any functional code.	Little or no attempt to solve a challenge or to present movement investigations.	Little or no attempt to produce a conversation.

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:			
Grade awarded:		**Marker: Colin Price**	**Moderator*: Andrew Tomlinson**

** 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