DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY
COURSEWORK ASSESSMENT DESCRIPTION 2021/22

UNIVERSITY OF HULL

MODULE DETAILS:

Module Number:	600088	Trimester:	1
Module Title:	Virtual Environments		
Lecturer:	Dr Xinhui Ma		

COURSEWORK DETAILS:

Assessment Number:	1	of	2		
Title of Assessment:	Simple Virtual Environment – Experimental Study Design				
Format:	Report	N/A	N/A		
Method of Working:	Individual				
Workload Guidance:	Typically, you should expect to spend between	20	and	30	hours on this assessment
Length of Submission:	This assessment should be **no** more than: *(over length submissions **will be** penalised as per University policy)*	2000 **words** *(excluding diagrams, appendices, references, code)*			

PUBLICATION:

Date of issue:	04/10/2021, Monday

SUBMISSION:

ONE copy of this assessment should be handed in via:	Canvas		If Other (state method)	
Time and date for submission:	**Time**	2pm	**Date**	01/11/2021,Monday
If **multiple hand–ins** please provide details*:*				
Will submission be scanned via TurnitinUK?	No	If submission is to be scanned byTurnitin, these should be one of the allowed types e.g. Word, RT, PDF, PPT, XLS etc. Specify any particular requirements in the subumission details Students MUST NOT submit ZIP or other archive formats unless specified. Students are reminded they can **ONLY** submit **ONE** file and must ensure they upload the correct file. Normally only the LAST submission will be considered (and if late incur a late penalty).		

The assessment must be submitted **no later** than the time and date shown above, unless an extension has been authorised on a *Coursework Extension Form: s*ee the Canvas site: Help&Support > Student Forms

MARKING:

Marking will be by:	Student Name

ASSESSMENT:

The assessment is marked out of:	100	and is worth	40	% of the module marks
N.B If multiple hand-ins please indicate the marks and % apportioned to each stage above (i.e. Stage 1 – 50, Stage 2 – 50). It is these marks that will be presented to the exam board.				

ASSESSMENT STRATEGY AND LEARNING OUTCOMES:

The overall assessment strategy is designed to evaluate the student's achievement of the module learning outcomes, and is subdivided as follows:

LO	Learning Outcome	Method of Assessment *{e.g. report, demo}*
1	Describe enabling concepts, technologies and techniques in the field of virtual environments and user-centred testing.	Report
2	Assess the suitability of key technologies and techniques with respect to different application and problem areas.	Report

Assessment Criteria	Contributes to Learning Outcome	Mark
See table below	1 2	50 50

FEEDBACK

Feedback will be given via:	Marksheet	Feedback will be given via:	
Exemption (staff to explain why)			
Feedback will be provided no later than 4 'teaching weeks' after the submission date.			

This assessment is set in the context of the learning outcomes for the module and does not by itself constitute a definitive specification of the assessment. If you are in any doubt as to the relationship between what you have been asked to do and the module content you should take this matter up with the member of staff who set the assessment as soon as possible.

You are advised to read the **NOTES** regarding late penalties, over-length assignments, unfair means and quality assurance in your student handbook, which is available on Canvas.

In particular, please be aware that:

- Up to and including 24 hours after the deadline, a penalty of 10%
- More than 24 hours and up to and including 7 days after the deadline; either a penalty of 10% or the mark awarded is reduced to the pass mark, **whichever results in the lower mark**
- More than 7 days after the deadline, a mark of zero is awarded.

- The overlength penalty applies to your written report (which includes bullet points, and lists

of text. It does not include contents page, graphs, data tables and appendices). 10-20% over the word count incurs a penalty of 10%. Your mark will be awarded zero if you exceed the word count by more than 20%.

Please be reminded that you are responsible for reading the University Code of Practice on Academic Misconduct through the Assessment section of the Quality Handbook (via the SharePoint site). This govern all forms of illegitimate academic conduct which may be described as cheating, including plagiarism. The term 'academic misconduct' is used in the regulations to indicate that a very wide range of behaviour is punishable.

In case of any subsequent dispute, query, or appeal regarding your coursework, you are reminded that it is your responsibility to produce the assignment in question.

Description of assessment task.

The assignment is to design a pilot study to address **one** of the following general statements.

- Microsoft HoloLens AR headset is only accessible to people with good vision.
- There is a difference in the "look mechanic" between a Virtual Environment and the real world.
- Spatial perception distortion is not a problem in Augmented Reality.
- Spatial perception distortion is only apparent in distances over 1 meter.
- Viewing media in stereo 3D produces a stronger emotional response than in equivalent 2D view.
- Eye level first person camera position 360 film is the only comfortable position when viewed in a VR headset

You can suggest your own study if you have an area that interests you however please check this is suitable with the module tutor before starting the assignment.

Your experimental design must be written up in the form of an application for research funding. The format of these applications varies depending on the funding source, and much of the information required is on the justification of the amount of money applied for. For this assignment you should follow the report structure outlined below. The maximum word count for each section should be followed; some grant awarding bodies either restrict the word count on the forms or reject the application if the word count is exceeded.

Statement of the Problem (Plain English Summary)
The statement of the problem, or why your research should be conducted, is a crucial section that should be a short summary of the problem you are trying to address, written in a form that can be understood by a none expert in the field. This section describes what your research question is and what the general conclusion of your research will be.
This should be no more than 200 words for this assessment.

Hypotheses
Your hypotheses provide answers to your research questions. Hypotheses must be measurable and should be stated in empirical terms if possible. An example of a hypothesis is, "Athletes performance levels are maintained for longer if they hydrate during competition" . The same hypothesis stated empirically would be "Athletes completing a timed 5k run on a treadmill perform better if they drink 100ml of water during the test". These are not good examples, but they show the difference between the two. Anticipating your results tells your reader that you thoroughly

understand your research area, however you should avoid giving the impression that the results are a forgone conclusion.
This should be no more than 150 words for this assessment.

Theoretical background and Literature review.
You should clearly describe the theory, demonstrate how it applies to your research topic, and define any key terms in this section. The theoretical framework should explain how you connected your research question to the empirical hypotheses.
The literature review section should outline any significant work in the area that has been done before and should how your work will further this. The literature review should demonstrate that this work has not been done. You should try to critically evaluate the literature.
This should be no more than 500 words

Method and Design
The method and design section should describe in specific detail how you will answer your research questions and test your hypotheses. You must describe your sample and how you will recruit your participants. In addition to explaining your methods and equipment, you must justify their selection. Include a timeline for your proposed test. As you will almost certainly be proposing to test human subjects you must consider the ethical implications and risk to the participants. There is a link to the universities research governance documentation at the bottom of this description.
This should be no more than 700 words

Data Analysis Plan
You should outline your plans for analyzing and visualizing the data. You should know how you will collect and analyze the data before you start to collect if. you should also justify your sample size and describe how you will minimize Type I and II errors. If appropriate, discuss how you will prevent contamination across treatment groups and what control groups you will use.
This should be no more than 300 words

Conclusion/Statement of significance
You should write a short conclusion that states what the significant finding of your study will be. It should outline any implications for future research in the field.
This should be no more than 150 words

References
These should be from research journal articles, you should not use web links or opinion pieces from websites.
There is no work limit, however you should aim to use between 5 and 10 references.

Marking

The following grid will be used when marking.

Implementation	Excellent Implementation	Good/Average	Below average/ Poor
Form a Hypothesis You should decide on a study to perform based on the statements above. You should suggest a hypothesis to test based on the statement you have selected.	A hypothesis that is a scientific statement, verifiable with reference to empirical data and relies on data that can be measured. 20-12	A hypothesis that is a scientific statement but is hard to verify due to difficulties in the data to be collected or the variable being measured 12-7	A Hypothesis that is subjective or anecdotal and would be difficult or impossible to measure. 6-0
Design the pilot study Design a pilot study to test your hypothesis and outline the test you would perform. You must outline the data you will collect and how you will compensate for errors and reduce unwanted variability in the test subject.	A thorough description of the testing methods to be used together with validatory evidence. References to similar studies and their findings and a description of the testing procedure. All ethical and health and safety considerations have been assessed. 30-20	A good description of the testing methods and procedure but may be missing references to previous work or ethical and H+S considerations. 20-10	Testing methods and procedure are poorly described and not referenced to previous. Health and Safety information or ethical considerations are not covered. 10-0
Data Analysis Briefly outline the way your experimental data will be analyzed and presented. A description of the statistical method you will use should be given along with some indication of how statistical significance will be proved.	A full description of the data to be collected, what the dependent variables are and how many tests must be performed. What control data will be collected are described and the statistical tests to be performed are justified. 30-20	The data to be collected is described and justified but information on the control group and/or the statistical test is not justified or described. 20-10	The data to be collected has been described but not justified and there are inaccuracies or discrepancies in the statistical analysis proposed. 10-0
Present the results Describe how the results will be presented.	Clear description of how the results will be presented and the data will be visualized using appropriate images, figures, tables or charts. 10-7	Clear description of how the results will be presented and the data will be visualized. 6-4	Description of how the results will be presented and the data will be visualized, but not appropriate. 3-0
References Evidence of appropriate referencing.	An excellent set of references will indicate a wide scope of relevant research sources. All references will be presented in full and linked to narrative consistently according to the Harvard protocol. 10-7	All references will be presented in full and linked to narrative consistently according to the Harvard protocol. 6-4	Some references will be presented, but the format may not appropriate. 3-0