PRCO304: Approved Ethics Application

The ethics application below has been approved subject to the following condition:

- Audio/video recording will only be carried out with the written permission of the Participant – and this will be made explicitly clear on the Research Information Sheet

PLYMOUTH UNIVERSITY FACULTY OF SCIENCE AND ENGINEERING

Research Ethics Committee

APPLICATION FOR ETHICAL APPROVAL OF RESEARCH INVOLVING HUMAN PARTICIPANTS

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1. TYPE OF PROJECT

1.1 What is the type of project?

STAFF

- ☐ Specific project
- ☐ Thematic programme of research
- ☐ Practical / Laboratory Class

POSTGRADUATE STUDENTS

- ☐ Taught Masters Project
- ☐ M.Phil / PhD by research

UNDERGRADUATE STUDENTS

- ☒ Student research project
- ☐ Practical / Laboratory class where you are acting as the experimenter

2. APPLICATION

2.1 TITLE of Research project
Client and user interaction for Final Stage Computing Project module (PRCO304)
2.2 General summary of the proposed research for which ethical clearance is sought, briefly outlining the aims and objectives and providing details of interventions/procedures involving participants (no jargon)
For PRCO304, many students develop (design, build and test) a piece of computer software to solve a real-world problem – possibly for a real-world Client organisation. A key component of this development is interaction with users and members of the Client organisation, which aims to elicit information on the required features of the intended system and (once a system prototype is available) gain feedback on its features. The work is individual (not group) - each student chooses their own topic. For all projects covered by this ethical application: • *All participation will be entirely voluntary, and participants can withdraw during the session.* • *No financial incentive will be given.* • *Participation (or not) will have no bearing on the participants' work (such as performance reviews, promotion, or academic assessment).* The client/user interactions covered by this ethical application does **not** involve: - ethically sensitive issues - children (under 18) and vulnerable adults - deception - external institutions other than the Client organisation - the general public (including family, friends) - physical or psychological risk to participants The interactions covered by this application do include (the above-mentioned) interactions relating to the

development of web-applications; they do not include (other forms of) research over the Internet.

If a student wishes to undertake a topic which does not comply with the above, they will need to submit a separate ethics application.

2.3 Physical site(s) where research will be carried out

University Campus or Client organisation premises

2.4 External Institutions involved in the research (e.g. other university, hospital, prison etc.)

The Client organisation

2.5 Name, telephone number, e-mail address and position of lead person for this project (plus full details of Project Supervisor if applicable)

Dr Chris Johnson
PRCO304 Module Leader
01752 586244
c.johnson@plymouth.ac.uk

All students have an individual PRCO304 project with their own individual supervisor

2.6 Start and end date for research for which ethical clearance is sought

Start date: 1 February 2017 End date: 1 February 2020

2.7 Has this project received ethical approval from another Ethics Committee?

No

2.8 If yes, do you want Chairman's action?

No

If yes, please include other application and approval letter and STOP HERE. If no, please continue

3. PROCEDURE

3.1 Describe procedures that participants will engage in

There are 3 groups of people involved in this work:
- academic staff responsible for delivering the module (specifically in the role of project supervisor), referred to as Staff
- University of Plymouth students who act as investigators and are enrolled on the PRCO304 module, referred to as Investigators
- University of Plymouth students (and in rare cases staff) and members of staff from the Client organisation who act as participants, referred to as Participants

The following protocol will be used:

0. Each investigator must arrange for their specific tasks, interview plan and/or questionnaire to be checked by a member of staff (usually their project supervisor), prior to contacting participants

1. Briefing
1.1 Participants will be provided with an information sheet (sample included as Appendix A), and a consent form (sample included as Appendix B).
1.2 If an anonymous questionnaire is used, then completion of the questionnaire will be taken as informed consent, and the questionnaire will indicate that withdrawal is not possible after submission.

A unique arbitrary number will be written on the information sheet and on all data relating to the current participant (to facilitate anonymous withdrawal at a later date). The information sheet is left with the participant, and the consent form is retained by the investigator.

2. Activity
2.1 System overview – The investigator may outline the aims of the intended system and/or demonstrate features of the system prototype
2.2 Prototype usage tasks – The participants may be asked to undertake artificial (but realistic) tasks using the system prototype - such as finding a page on a web-site - with the researcher observing. A Thinking Aloud Protocol may be used (where participants are encouraged to describe their thoughts during the activity). Video and/or audio recording may be used (with permission from participants) for transcribing purposes, to more accurately record aspects of the participants' experiences of using the software. These recordings may be transcribed or notes made from them, and recurrent themes identified (such as software benefits, errors, and difficulties). These will be used to assess the software's effectiveness, but will not assess individual participants. Counts of the number of participants reporting a theme may be used to

prioritise themes.
2.3 Semi-structured Interviews which may be recorded: these will provide information about the participant's views on the required features of the intended system, or provide feedback on the participants usage of the system prototype
2.4 Questionnaire handed out on paper … for the same purposes as 2.3

Audio/video recording is not essential and this fact will be conveyed to Participants. Audio/video recording will only be carried out with the written permission of Participants.

If permission is given for audio/video recording then it will be setup so that only those who have consented are picked up. For video recording a machine at the extremity of the room will be selected and the video camera fixed so that it can only pick up the user's hands and the screen of that machine. There is no requirement to capture images of participants' faces.

When University of Plymouth students act as participants, the research will take place on University of Plymouth premises.

When Client staff act as participants, the research will take place either on University of Plymouth or Client premises.

3.2 How long will the procedures take? Give details

10-60 minutes per participant

3.3 Does your research involve deception?

No

3.4 If yes, please explain why the following conditions apply to your research:

a) Deception is completely unavoidable if the purpose of the research is to be met

b) The research objective has strong scientific merit

c) Any potential harm arising from the proposed deception can be effectively neutralised or reversed by the proposed debriefing procedures (see section below)

3.5 Describe how you will debrief your participants

3.6 Are there any ethical issues (e.g. sensitive material)?

No

3.7 If yes, please explain.

4. BREAKDOWN OF PARTICIPANTS

4.1 Summary of participants

Type of participant	*Number of participants*
Non-vulnerable Adults	*between 1 and 20*
Minors (< 16 years)	*0*
Minors (16-18 years)	*0*
Vulnerable Participants (other than by virtue of being a minor)	*0*
Other (please specify)	*0*

TOTAL	*between 1 and 20*

4.2 How were the sample sizes determined?
Convenience, relating to what is achievable by students at this level within the time available. There is no requirement for statistical significance.
4.3 How will subjects be recruited?
Face-to-face – investigators may ask other students (and in rare cases members of staff) who they already know and regularly come into contact with. *Email membership groups – investigators may approach a group that they are a member of and ask to send emails to other members (e.g. ask their programme manager to email other students on their programme, ask the chair of a club/society to email members of that club).* *Email unknown groups – investigators may ask their project supervisor to send an email invitation to more specialist groups (e.g. specific degree programmes, or clubs and societies).* *Staff from the client organisation may be nominated by the client organisation.*
4.4 Will subjects be financially rewarded? If yes, please give details.
No

5. NON-VULNERABLE ADULTS

5.1 Are some or all of the participants non-vulnerable adults?
Yes
5.2 Inclusion / exclusion criteria
Participants will be students (and in rare cases staff) of Plymouth University (excluding partner colleges) or staff from the Client organisation
5.3 How will participants give informed consent?
Via consent form.
5.4 Consent form(s) attached
Yes
If no, why not?
n/a
5.5 Information sheet(s) attached
Yes
If no, why not?
n/a
5.6 How will participants be made aware of their right to withdraw at any time?
Information sheet, Consent form, and orally during briefing.
5.7 How will confidentiality be maintained, including archiving / destruction of primary data where appropriate, and how will the security of the data be maintained?
All audio/video recordings, field notes, and transcriptions will be stored on a password protected computer with access only to the investigator. Transcriptions will use a coding system (such as I – investigator, P – participant, etc.), all personally identifiable data will be substituted (e.g. 'J Smith walked in' would be changed to '[P2] walked in'). Published material (project report) will not identify individual participants (this is checked during assessment). *Currently, this module has c. 166 students. It seems likely that around 50% of them will act as investigators.*

6. MINORS <16 YEARS

6.1 Are some or all of the participants under the age of 16?
No
6.2 Age range(s) of minors
6.3 Inclusion / exclusion criteria
6.4 How will minors give informed consent? Please tick appropriate box and explain (See guidelines)
6.5 Consent form(s) for minor attached
If no, why not?

6.6 Information sheet(s) for minor attached
If no, why not?
6.7 Consent form(s) for parent / legal guardian attached
If no, why not?
6.8 Information sheet(s) for parent / legal guardian attached
If no, why not?
6.9 How will minors be made aware of their right to withdraw at any time?
6.10 How will confidentiality be maintained, including archiving / destruction of primary data where appropriate, and how will the security of the data be maintained?

7. MINORS 16-18 YEARS OLD

7.1 Are some or all of the participants between the ages of 16 and 18?
No
If yes, please consult special guidelines for working with minors. If no, please continue.
7.2 Inclusion / exclusion criteria
7.3 How will minors give informed consent? (See guidelines)
7.4 Consent form(s) for minor attached
If no, why not?
7.5 Information sheet(s) for minor attached
If no, why not?
7.6 Consent form(s) for parent / legal guardian attached
If no, why not?
7.7 Information sheet(s) for parent / legal guardian attached
If no, why not?
7.8 How will minors be made aware of their right to withdraw at any time?
7.9 How will confidentiality be maintained, including archiving / destruction of primary data where appropriate, and how will the security of the data be maintained?

8. VULNERABLE GROUPS

8.1 Are some or all of the participants vulnerable? (See guidelines)
No
8.2 Describe vulnerability (apart from possibly being a minor)
8.3 Inclusion / exclusion criteria
8.4 How will participants give informed consent?
8.5 Consent form(s) for vulnerable person attached

If no, why not?
8.6 Information sheet(s) for vulnerable person attached
If no, why not?
8.7 Consent form(s) for parent / legal guardian attached
If no, why not?
8.8 Information sheet(s) for parent / legal guardian attached
If no, why not?
8.9 How will participants be made aware of their right to withdraw at any time?
8.10 How will confidentiality be maintained, including archiving / destruction of primary data where appropriate, and how will the security of the data be maintained?

9. EXTERNAL CLEARANCES

9.1 Do ALL experimenters in contact with children and vulnerable adults have <u>current</u> DBS clearance? Please include photocopies.
N/A
If no, explain
9.2 If your research involves external institutions (school, social service, prison, hospital etc) please provide cover letter(s) from institutional heads permitting you to carry out research on their clients, and where applicable, on their site(s). Are these included?
N/A
If not, why not?

10. PHYSICAL RISK ASSESSMENT

10.1 Will participants be at risk of physical harm (e.g. from electrodes, other equipment)?
No
10.2 If yes, please describe
10.3 What measures have been taken to minimise risk?
10.4 How will you handle participants who appear to have been harmed?

11. PSYCHOLOGICAL RISK ASSESSMENT

11.1 Will participants be at risk of psychological harm (e.g. viewing explicit or emotionally sensitive material, being stressed, recounting traumatic events)?
No
11.2 If yes, please describe
11.3 What measures have been taken to minimise risk?
11.4 How will you handle participants who appear to have been harmed?

12. RESEARCH OVER THE INTERNET

12.1 Will research be carried out over the internet?
No
12.2 If yes, please explain protocol in detail, explaining how informed consent will be given, right to withdraw maintained, and confidentiality maintained.

13. CONFLICTS OF INTEREST & THIRD PARTY INTERESTS

13.1 Do any of the experimenters have a conflict of interest? (See guidelines)
No
13.2 If yes, please describe
13.3 Are there any third parties involved? (See guidelines)
No
13.4 If yes, please describe
13.5 Do any of the third parties have a conflict of interest?
No
13.6 If yes, please describe

14. ADDITIONAL INFORMATION

14.1 Give details of any professional bodies whose ethical policies apply to this research
14.2 Please give any additional information that you wish to be considered in this application

15. ETHICAL PROTOCOL & DECLARATION

To the best of our knowledge and belief, this research conforms to the ethical principles laid down by the University of Plymouth and by any professional body specified in section 14 above.

This research conforms to the University's Ethical Principles for Research Involving Human Participants with regard to openness and honesty, protection from harm, right to withdraw, debriefing, confidentiality, and informed consent

Sign below where appropriate:

STAFF / RESEARCH POSTGRADUATES

Principal Investigator: Chris Johnson (19 December 2016)

All members of Computing staff may act as a project supervisor of a project relating to this ethical application

Staff and Research Postgraduates should email the completed and signed copy of this form to Paula Simson.

UG Students

	Print Name	**Signature**	**Date**
Student:	_____	_____	_____
Supervisor / Advisor:	_____	_____	_____

Undergraduate students should pass on the completed and signed copy of this form to their School Representative on the Science and Engineering Human Ethics Committee.

	Signature	**Date**
School Representative on Science and Engineering Faculty Human Ethics Committee	_____	_____

Faculty of Science and Engineering Research Ethics Committee List of School Representatives

School of Geography, Earth and Environmental Sciences	Dr Sanzidur Rahman Dr Kim Ward
School of Biological Sciences	Dr Victor Kuri
School of Biomedical and Healthcare Sciences	Dr David J Price
School of Marine Science & Engineering	Dr Gillian Glegg (Chair) Dr Liz Hodgkinson
School of Computing, Electronics & Mathematics	Dr Mark Dixon Dr Yinghui Wei
External Representative	Prof Linda La Velle
Lay Member	Rev. David Evans

Committee Secretary: Mrs Paula Simson
email: paula.simson@plymouth.ac.uk
tel: 01752 584503

APPENDIX A: SAMPLE INFORMATION SHEET

ID: _____

PLYMOUTH UNIVERSITY
FACULTY OF SCIENCE AND ENVIRONMENT

RESEARCH INFORMATION SHEET

Name of Principal Investigator
****[student name]*

Title of Research
Client and user interaction for Final Stage Computing Project module (PRCO304)

For the above module, I am developing (design, build and test) a piece of computer software to solve a real-world problem. I would like you to help me identify and evaluate the features of software. This work is being done in accordance with the University of Plymouth's 'Ethical principles for research involving human participants':

1. **Informed Consent**: The work may involve one or more of the following:
   • **Observation** of you undertaking tasks using a prototype of the software, such as finding a page on a web-site (10-30 minutes). You are encouraged to describe your thoughts during the activity. This seeks to evaluate the software (not you) – to see how easy it is to use.
   • **Interviews**: You may be asked to describe your opinions on the desirable features of the software or on the usefulness of a prototype of the software (5-30 minutes). This may be audio recorded to provide an accurate transcription.
   • **Questionnaires:** You may be asked to complete a short questionnaire, asking for your opinions on the desirable features of the software or on the usefulness of a prototype of the software (5-20 minutes). Completion of the questionnaire will be taken as informed consent.
2. **Openness and Honesty**: There is no requirement for deception in this study.
3. **Right to Withdraw**: Signing this form does not commit you to take part in any part of the study. It is merely a record that you have participated willingly. You can withdraw at any time, during any activity, without giving a reason, by contacting the principal investigator and giving your **ID number** (at the top of this document). The data collected will not be in a format that could be used to measure the performance of individuals.
4. **Protection from Harm**: There is no obvious potential for this to occur, but the participant or the researcher can stop the study at any point.
5. **Debriefing**: The results of this study will be included in my project report, which will be available to all participants.
6. **Confidentiality**: Individual Participants will not be identified in any field notes, transcripts, reports, presentations, or publications (internal or external).
7. **Audio/video recording**: Audio/video recording will only take place with the written permission of the Participant

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance, or the module leader: c.johnson@plymouth.ac.uk. If you feel the problem has not been resolved please contact the secretary to the Faculty of Science and Environment Human Ethics Committee: Mrs Paula Simson 01752 584503

The participant should keep this document

APPENDIX B: SAMPLE CONSENT FORM

PLYMOUTH UNIVERSITY

FACULTY OF SCIENCE AND ENVIRONMENT

Human Ethics Committee Sample Consent Form

CONSENT TO PARICIPATE IN RESEARCH PROJECT / PRACTICAL STUDY

Name of Principal Investigator
****[student name]*

Title of Research
Client and user interaction for Final Stage Computing Project module (PRCO304)

Brief statement of purpose of work
To identify/evaluate the (intended) features of the ****[project topic]* Software.

The objectives of this research have been explained to me.

I understand that I am free to withdraw from the research at any stage, and ask for my data to be destroyed if I wish.

I understand that my anonymity is guaranteed, unless I expressly state otherwise.

I understand that the Principal Investigator of this work will have attempted, as far as possible, to avoid any risks, and that safety and health risks will have been separately assessed by appropriate authorities (e.g. under COSHH regulations)

Under these circumstances, I agree to participate in the research.

Name: …….

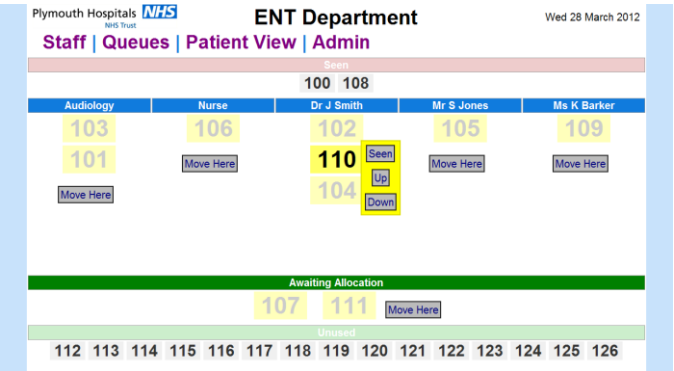
Signature: .....…….. Date: .....……..

The participant should give this document to the researcher

APPENDIX C – Sample software prototype usage task

Scenario

The Ear Nose and Throat (ENT) department has a computer-based system for displaying the status of queues to patients, and a touch screen device for staff to make changes:



The participant is asked to role place a nurse who is responsible for keeping the queues up to date. Changes (for example 'Move 106 to Mr X's queue) will come from various sources (such as patient notes arriving).

Subtasks

The researcher reads instructions to the participant (simulating ward activity), waiting for them to finish after each subtask. All names are fictitious (e.g. Smith is a fictitious doctor).

1 102 Smith
2 103 Audiology
3 101, 104, 105, 106 Awaiting
4 100 Jones
5 101 Audiology
6 105 Nurse
7 No, that should have been 106 [instead]
8 108, 109 to Barker
9 105 Jones
10 104 Smith
11 100 Seen
12 108 Seen
13 Emergency 110 goes to top of Smith
14 106 to Jones
15 107 to Nurse
16 103 to Jones, top of queue
17 112 to Barker
18 109 Seen
19 111 to Audiology
20 107 Seen
21 110 Seen
22 Ah, 107 wasn't seen [back to Nurse]
23 103 Seen
24 105 Awaiting Allocation
25 101 Jones, top of queue
26 107, 102 Seen
27 104 to Barker
28 101 Seen
29 112 Seen
30 111, 105 to Jones
31 106 Seen
32 104 Seen
33 105 to Barker
34 111, 105 Seen

APPENDIX D – Sample Interview Plan for software prototype evaluation

Software Prototype Evaluation: Interview Plan

Q1 Learnability: How easy (instinctive) was it to work out how to use the software?

Q2 Usability: Once you had worked out how to use the software, how easy was it to use?

Q3 Usefulness: How beneficial do you think this software would be to the business?

Q4 Any other suggestions, comments, or questions?

APPENDIX E – Sample Questionnaire for software prototype evaluation

Software Prototype Evaluation: Questionnaire

Your participation in this survey will be greatly valued.
Completion and submission of this questionnaire will be taken as informed consent.
However, you are ***not*** required to participate. You can stop at any time.
This questionnaire does ***not*** assess you in any way.
Once submitted, it will not be possible to identify (and therefore withdraw) you.

Please be honest, and as specific as possible.

1. How easy was each facility to learn:

	very difficult	difficult	ok	easy	very easy
registration	❑	❑	❑	❑	❑
login	❑	❑	❑	❑	❑
search	❑	❑	❑	❑	❑
delete	❑	❑	❑	❑	❑
logout	❑	❑	❑	❑	❑

2. How easy was each facility to use (once you'd worked out how it worked):

	very difficult	difficult	ok	easy	very easy
registration	❑	❑	❑	❑	❑
login	❑	❑	❑	❑	❑
search	❑	❑	❑	❑	❑
delete	❑	❑	❑	❑	❑
logout	❑	❑	❑	❑	❑

3. a) Overall, do you feel using the software would help you do the job?

   ❑ Yes ❑ No

   b) Why?
   ……
   ……
   ……
   ……

4. Any other comments or suggestions
   ……
   ……
   ……
   ……
   ……
   ……