Dublin City University
School of Computing

APPLICATION FOR APPROVAL OF AN
UNDERGRADUATE OR TAUGHT MASTERS
PROJECT INVOLVING **HUMAN PARTICIPANTS**

PROJECT TITLE	CA400 - Final Year Computer Applications project
PRINCIPAL INVESTIGATOR(S) *The Principal Investigator is the project supervisor and s/he has primary responsibility for the project.*	Dr. David Sinclair
START AND END DATE	5/10/2020 to 07/05/2021
STUDENT NAME(S), COURSE AND YEAR (E.G. EC4)	Ruth Leavey CASE4 Harley Martin CASE4
LEVEL OF RISK *Please confirm that this project requires notification only*	Notification only: YES

1. ADMINISTRATIVE DETAILS

1.1 WILL THE PROJECT BE UNDERTAKEN ON-SITE AT DUBLIN CITY UNIVERSITY?

YES or NO
NO

If NO, state details of the off-campus location – provide details of the approval to gain access to that location in section 2.7.

The survey to be used is an online survey and so will not require people to answer in on DCU grounds.
The project will be designed and developed from home due to COVID-19 restrictions for DCU campus.

DECLARATION BY PRINCIPAL INVESTIGATOR / SUPERVISOR

The information contained herein is, to the best of my knowledge and belief, accurate. I have read the University's current research ethics guidelines, and accept responsibility for the conduct of the procedures set out in the attached application in accordance with the form guidelines, the REC guidelines (https://www.dcu.ie/researchsupport/researchethics.shtml), the University's policy on Conflict of Interest, Code of Good Research Practice and any other condition laid down by the Dublin City University Research Ethics Committee. I have attempted to identify all risks related to the project that may arise in conducting this project and acknowledge my obligations and the rights of the participants.

If there exists any affiliation or financial interest for researcher(s) in this project or its outcomes or any other circumstances which might represent a perceived, potential or actual conflict of interest this should be declared in accordance with Dublin City University policy on Conflicts of Interest.
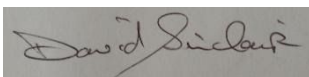
I and my co-investigators and/or supporting staff have the appropriate qualifications, experience and facilities to conduct the project set out in the attached application and to deal with any emergencies and contingencies related to the project that may arise. Supervisor(s) signature(s) are required as evidence that they have read and approve the submission.

Please note:

1. *Any amendments to the original approved proposal must receive prior School Ethics Committee approval.*

2. *As a condition of approval investigators are required to document and report immediately to the School of Computing Ethics Committee any adverse events, any issues which might negatively impact on the conduct of the project and/or any complaint from a participant relating to their participation in the study*

Electronic Signature(s):

Principal investigator / Supervisor: ___David Sinclair_____

Print Name(s) here:_____David Sinclair_____

Date: _01/12/2020__

I/We, the students on this proposal, have read and approve this submission

Student(s) signature(s):__Ruth Leavey & Harley Martin_____

Print Name(s) here:___RUTH LEAVEY & HARLEY MARTIN_____

Date: _30/11/2020_____

2. PROJECT OUTLINE

2.1 LAY DESCRIPTION, AIMS & JUSTIFICATION, METHODOLOGY *(up to.100 words)*

Our project is the design and development of a workload measurement system for nurse and nurse management staff.

Our system will require nurses to record tasks completed for patients and select associated levels of difficulty relating to them. This information will be stored and calculated to give an overall workload score. This workload score will be displayed to nurse management to represent the current workload required and hence help to quickly identify if a ward is overwhelmed and reallocation of nurses is needed. Additional data analysis is undertaken to identify any patterns and trends recurring and to create possible predictions and probability for future ward workload.

We wish to present a survey to a number of nurses/nurse managers which asks them questions to help us gauge their opinion of our idea and any requirements they may have for it.

2.2 PARTICIPANT PROFILE

Our participants will consist of nurses, nurse managers or nurse directors. The reason for these participants is because they would be the real-world users of our system were it to exist.

2.3 PARTICIPANT RECRUITMENT

Both of us have contacts who have helped us obtain names and contact details of possible participants.

A nurse manager and a nurse director (who's names and contact details were obtained through Harley's aunt) will be emailed to request their participation. This email will contain an appropriate plain language statement as well as a link to the survey.

Ruth's dad is a consultant in a hospital and has provided us with the name and contact details of the nurse director of the hospital where he works.

Due to the hospital regulations, we will send a formal letter to this nurse director. In this letter we will provide an appropriate plain language statement. We will also request for the nurse director to administer the survey to a number of nursing staff for whom this survey might relate to. We will also ask for her to nominate a gatekeeper among her staff who we can work with to help administer the survey.

See 2.8 for more info

2.4I IS IT LIKELY THAT ANY PARTICIPANTS COULD BE CONSIDERED POTENTIALLY VULNERABLE?

YES or NO
NO

2.5   WILL THE IDENTITY OF THE PARTICIPANTS BE PROTECTED?

YES or NO
YES

If NO, please explain why

IF YOU ANSWERED YES TO 2.5, PLEASE ANSWER THE FOLLOWING QUESTION:

2.6   HOW WILL THE ANONYMITY OF THE PARTICIPANTS BE RESPECTED?
Please bear in mind that where the sample size is very small, it may be impossible to guarantee anonymity/confidentiality of participant identity. Participants involved in such projects need to be advised of this limitation in the Plain Language Statement/Information Sheet. If you intend to fully anonymize the data, please provide details

The survey is online and participants will not be asked for their names, ages, where they are from or any other questions requiring identifying data.

2.7   LEGAL LIMITATIONS TO DATA CONFIDENTIALITY
Participants need to be made aware that confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions. This information should be included in your Plain Language Statement and Informed Consent Form. Depending on the project proposal and academic discipline, you may need to state additional specific limitations.

State how and where participants will be informed of these limitations

Participants will be informed of legal limitations to data confidentiality in the plain language statement. It will be detailed as follows: "*Confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.* "

2.8(a)   EXPLAIN HOW PARTICIPANTS ARE TO BE RECRUITED
Please provide specific details as to how you will be recruiting participants. How will people be informed that you are doing this research? How will they be approached and asked if they are willing to participate? If you are e-mailing, mailing or phoning people, please explain how you have obtained their names and contact details. If a recruitment advertisement is to be used, please ensure you attach a copy to this application.

Both of us have contacts who have helped us obtain names and contact details of possible participants. A nurse manager and a nurse director (who's names and contact details were obtained through Harley's aunt) will be emailed to request their participation. This email will contain an appropriate plain language statement as well as a link to the survey. Draft Email content: *Hi <name>,* *Our names are Ruth Leavey and Harley Martin. We were given your email by <name>.* *We are final year students studying the course Computer Applications and Software Engineering in Dublin City University (DCU). As part of our final year, we are required to complete a final year project of our own idea which acts as a practical implementation of all that we have learned throughout our degree. For this required project, we have chosen to design and develop a workload measurement system for nurse and nurse management staff in a hospital.* *We are currently in the early planning stages of our project and have created a survey with the goal to receive input from professionals who would be the real-world target users of our project. We are emailing to ask if you would be a participant in this survey. Please see more information regarding this survey in the Plain Language Statement attached in this email.* *Attachment: Plain_Language_Statement*

We look forward to hearing from you.

Kind Regards,

Ruth Leavey, Harley Martin

*Note that the Plain Language statement is included at the bottom of this document appendix 4 and below in the draft letter content

Ruth's dad is a consultant in a hospital and has provided us with the name and contact details of the nurse director of the hospital where he works.
Due to the hospital regulations, we will send/email a formal letter to this nurse director. In this letter we will provide an appropriate plain language statement. We will also request for the nurse director to administer the survey to a number of nursing staff for whom this survey might relate to. We will also ask for her to nominate a gatekeeper among her staff who we can work with to help administer the survey.

Draft Letter content:

Dear <name>,

Our names are Ruth Leavey and Harley Martin.

We are final year students studying the course Computer Applications and Software Engineering in Dublin City University (DCU). As part of our final year, we are required to complete a final year project of our own idea which acts as a practical implementation of all that we have learned throughout our degree. For this required project, we have chosen to design and develop a workload measurement system for nurse and nurse management staff in a hospital.

We are currently in the early planning stages of our project and have created a survey with the goal to receive input from professionals who would be the real-world target users of our project. The survey is completely anonymous and does not require any identifying data from its respondents. Please see the Plain Language Statement below which details our project and survey in detail

Plain Language Statement
Our project is the design and development of a workload measurement system for nurse and nurse management staff.
Our system will require nurses to record tasks completed for patients and select associated levels of difficulty relating to them. This information will be stored and calculated to give an overall workload score. This workload score will be displayed to nurse management to represent the current workload required and hence help to quickly identify if a ward is overwhelmed and reallocation of nurses is needed. Additional data analysis is undertaken to identify any patterns and trends recurring and to create possible predictions and probability for future ward workload.

The name of our survey is Nurse Workload Measurement System. This survey is a small part of a final year project by two students studying B.Sc in Computer Applications and Software Engineering in DCU's School of Computing. The project team consists of Ruth Leavey and Harley Martin who are doing the project, and their supervisor Dr David Sinclair, also of DCU's School of Computing. The data retrieved from this survey will be controlled by DCU, and processed by DCU and Google, as the survey is in the form of a Google Form, and the survey and responses are retained in DCU's Google Drive.

The purpose of this survey is to gain meaningful insight into a part of the nursing domain. Participants in this survey will be required to answer the 12 questions in our survey, which should take approximately 5 minutes to complete. This will involve giving their professional judgement and opinion on workload measurement systems similar to ours and on the details of our proposed workload measurement system.

> *The purpose of this data processing (ie. the reason we are requesting responses to this survey and the purpose for which they will be applied) is to get an understanding of the needs of nursing staff in relation to workload measurement systems similar to the one our project proposes. The project team wants answers to the questions we asked so that we can ensure we are creating a system that provides solutions that nursing staff want and need. The responses to this survey will be processed and retained for the purpose of assessment of our project. Our assessors will need to see this information so that they can have proof that we built a system that fits the needs of real nursing staff.*
>
> *Participation in this survey is voluntary. Participants do not benefit from their involvement. There are no risks in participation. Participants will not be notified of the success of the project. Our survey is completely anonymous so no personal data will be processed or retained from participants. This data will not be used for any future studies outside of the domain of our final year project. Participants may withdraw from the survey at any point if they wish, and their involvement in the survey will end at the point they withdraw and their data will not be processed or retained. Confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.*
>
> *DCU and Google are the only parties that will process this information as this is a DCU run project and our survey and responses are retained in DCU's Google Drive. This data will not be shared with or transferred to any other countries. There will be only one digital copy of this data retained until the end of the retention period and no hard copies will ever be created. The data will be retained until October 2021, the end of the current DCU academic year. After that this data will be disposed of by deleting all traces of it from DCU's Google Drive. Any individual participating in this survey has the right to lodge a complaint if they wish with the [Irish Data Protection Commission](#).*
>
> *If participants have concerns about this study and wish to contact an independent person, please contact:*
> *The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000, e-mail rec@dcu.ie*
>
> *We are writing to request if you could please administer this survey within your department to nurses for whom the survey might relate to and the management work that they do. We also ask you to nominate a gatekeeper among your staff whom we could work with to help administer the survey.*
>
> *Yours Sincerely,*
>
> *Ruth Leavey, Harley Martin*

2.8(b)   CHILD PARTICIPANTS (anyone under 18 years old)

*If your participants include children, you **must** confirm that you are in compliance with the research specific guidelines as detailed in "Keeping Children Safe - Policies and Procedures supporting Child Protection at DCU" - available at: https://www4.dcu.ie/sites/default/files/policy/157%20-%20child_protection_handbook_rev1%282%29%281%29.pdf*

Please indicate your compliance with the following guidelines:	Mark here
We confirm that we have read and agree to act in accordance with the DCU Child Protection policy and procedures	N/A
We confirm that we have put in place safeguards for the children participating in the project	N/A
We confirm that we have supports in place for children who may disclose current or historical abuse (whether or not this is the focus of the project)	N/A

2.9   PLEASE EXPLAIN WHEN, HOW, WHERE, AND TO WHOM RESULTS WILL BE DISSEMINATED, INCLUDING WHETHER PARTICIPANTS WILL BE PROVIDED WITH ANY INFORMATION AS TO THE FINDINGS OR OUTCOMES OF THE PROJECT?

> The results from our survey will be taken into account throughout the design process of our project. This is due to the fact that the results refer to the initial functionality and design of our project idea and provide us with useful opinions and further possible requirements.

The results will be referenced during user objectives and requirements descriptions in project documentation. This documentation will be available to school of computing staff who examine our project.
Participants will not be provided with any information findings or outcomes of the project unless requested.

2.10   ARE OTHER APPROVALS REQUIRED TO GAIN ACCESS TO ANOTHER LOCATION, ORGANISATION, SCHOOL ETC.?

YES or NO
NO

If YES, please specify from whom and attach a copy of the approval documentation. If this is not yet available, please explain when this will be obtained.

3.   RISK AND RISK MANAGEMENT

3.1   EXPLAIN AND JUSTIFY THE STATED LEVEL OF RISK TO PARTICIPANTS
You must provide a justification that the stated level of risk and its corresponding level of review is notification only and not Full Committee or Expedited, as indicated on the cover page of your application. Note that the level of risk may be influenced by the vulnerability of the research group, the methods employed and the nature of the project itself. For further information on risk levels, please refer to the Levels of Review information on the website: https://www.dcu.ie/researchsupport/researchethics.shtml

> The stated level of risk and its corresponding level of review is notification only. We can justify this as our survey is completely anonymous and will elicit NO significant difficulties for the participants involved.

3.2   POTENTIAL RISKS TO PARTICIPANTS AND RISK MANAGEMENT PROCEDURES
Identify, as far as possible, all potential risks to participants (physical, psychological, social, legal, economic, etc.), associated with the proposed project. Will your project involve deception, investigation of participants involved in illegal activities, performance of any acts which might diminish the self-esteem of participants or cause them to experience embarrassment, regret or depression? Please explain what risk management procedures will be put in place to minimise these risks.

> There are no potential risks associated with our proposed project.

3.3   ARE THERE LIKELY TO BE ANY BENEFITS (DIRECT OR INDIRECT) TO PARTICIPANTS FROM THIS RESEARCH?

YES or NO
NO

If YES, provide details

3.4   ARE THERE ANY SPECIFIC RISKS TO YOURSELVES IN CARRYING OUT THIS PROJECT?
Examples include use of dangerous materials, asking certain types of questions, The project being undertaken in certain locations, researchers working alone in isolated areas, etc.

YES or NO
NO

If YES, please describe and explain what risk management procedures will be put in place to minimise these risks

3.5   DEALING WITH ADVERSE/UNEXPECTED OUTCOMES
Please describe what measures/protocols you have put in place in the event that there are any unexpected outcomes or adverse effects to participants arising from involvement in the project.

> N/A

3.6   SUPPORT FOR PARTICIPANTS
Depending on risks to participants you may need to consider having additional support for participants during/after the study. Consider whether your project would require additional support, e.g., external counselling available to participants. Please advise what support will be available.

> N/A

3.7   HOW WILL THE CONDUCT OF THE PROJECT BE MONITORED?
Please explain how the principal investigator will monitor the conduct of the project (especially where several people are involved in recruiting or interviewing, administering procedures, etc.) to ensure that it conforms with the procedures set out in this application. In the case of student projects please give details of how the supervisor(s) will monitor the conduct of the project.

> Our supervisor will monitor the conduct of the project by us staying in constant contact with him and showing him each part of our project to ensure we have his approval.

3.8   DO YOU PROPOSE TO OFFER PAYMENTS OR INCENTIVES TO PARTICIPANTS?

YES or NO
NO

If YES, please provide further details

3.9   DO ANY OF THE RESEARCHERS ON THIS PROJECT HAVE A PERSONAL, PHILOSOPHICAL, FINANCIAL, POLITICAL, IDEOLOGICAL, OR COMMERCIAL INTEREST IN ITS OUTCOME THAT MIGHT INFLUENCE THE INTEGRITY OF THE PROJECT OR BIAS THE CONDUCT OR REPORTING OF THE PROJECT, OR UNDULY DELAY OR OTHERWISE AFFECT THEIR PUBLICATION?

YES or NO
NO

If YES, please specify how this conflict of interest will be addressed

4. PERSONAL DATA - COMPLIANCE WITH THE GENERAL DATA PROTECTION REGULATION (GDPR)

Applicant declaration:

0	**I understand that the proposed project, as set out in this form, is to be carried out by me in my capacity as a student of Dublin City University.**	YES or NO	YES

What does "Personal Data" mean?

Personal data is any information about a living person, where that person is identified or could be identified, either from the data itself or when it is combined with other data.

Personal Data is defined in Article 4(1) of the GDPR and can include, but is not limited to the following: hard-copy information (e.g. files, records); electronic information (e.g. databases, online survey returns); written information; consent declarations, interview notes, still or moving images; audio & visual recordings; IP addresses; an individual's handwriting; clinical or medical data; diagnostic or other clinical imaging; etc.

Further information is available from the DCU Data Protection Unit

4.1 ASSESSING DATA PROTECTION RISKS & REQUIREMENTS

Note 1: What does 'Minor' and 'Vulnerable Individual' mean?

A **minor** is defined as an individual below 18 years of age. Where the processing relates to 'electronic marketing' the age limit is reduced to 16 years. A **vulnerable individual** may be anyone who is unable to consent to, or oppose, the processing of his or her personal data for any reason. Both of these are of particular importance if the project compels the provision of data from individuals.

Note 2: What does 'large scale processing' mean?

The GDPR does not define what constitutes large-scale. EU guidance recommends that the following factors, in particular, be considered when determining whether the processing is carried out on a large scale:
- the number of data subjects (either as a specific number or proportion of the relevant population);
- the volume of data and/or the range of different data items being processed;
- the duration, or permanence, of the data processing activity; &
- the geographical extent of the processing activity.

Examples of large-scale processing include, but are not limited to:
- processing of patient data in the regular course of business by a hospital;
- processing of travel data of individuals using a public transport system (e.g. tracking via travel cards);
- processing of real time geo-location data of customers of an international fast food chain for statistical purposes by a processor specialised in these activities;
- processing of customer data in the regular course of business by an insurance company or a bank;
- processing of personal data for behavioural advertising by a search engine; &
- processing of data (content, traffic, location) by telephone or internet service providers.

Examples that do **not** constitute large-scale processing include, but are not limited to:
- processing of patient data by an individual physician; and
- processing of personal data relating to criminal convictions and offences by an individual lawyer.

A. Applicant Data Protection Assessment Questionnaire – Part I		
1	Does your project include living human subjects?	YES or NO	YES
2	Does your project include the use of any information (i.e. 'Personal Data') relating to an identified, or identifiable, person?	YES or NO	NO

3	Does your project include the use of identifiers such as: a name, an identification number, location data, an online identifier, or other similar identifiers?	**YES or NO**	**NO**
4	Does your project include the use of Personal Data specific to the physical, physiological, genetic, mental, economic, cultural or social identity of any living individual?	**YES or NO**	**NO**

If you answered 'Yes' to one or more of Questions 1-4 above, please continue to Part II below (otherwise proceed to the next section of this form). You should also consult with your Supervisor / Principal Investigator to ensure adequate Data Protection compliance measures are in place.

B. Applicant Data Protection Assessment Questionnaire – Part II			
5(a)	Does your project include the use of Personal Data of individuals which reveals any of the attributes or characteristics below? If 'Yes,' please indicate which will be used in your project **(tick all that apply):**	**YES or NO**	**NO**
	racial or ethnic origin	**YES or NO**	**NO**
	political opinions	**YES or NO**	**NO**
	religious or philosophical beliefs	**YES or NO**	**NO**
	trade union membership	**YES or NO**	**NO**
	genetic data	**YES or NO**	**NO**
	biometric data	**YES or NO**	**NO**
	data concerning health	**YES or NO**	**NO**
	data concerning a natural person's sex life or sexual orientation	**YES or NO**	**NO**
5(b)	Does your project include the use of Personal Data relating to minors or vulnerable individuals? *(See **Note 1**, below)*	**YES or NO**	**NO**
6	Does your project include the use of Personal Data of individuals relating to their criminal convictions and/or offences?	**YES or NO**	**NO**
7	Does your project include large-scale processing of personal data relating to living individuals? *This may include: a wide range or large volume of personal data; processing which takes place over a large geographical area; or where a large number of people are affected (e.g. over 100 individuals); or where the processing is extensive or has long-lasting effects. (See **Note 2**, below)*	**YES or NO**	**NO.**
8	Does your project include any form of automated processing of personal data, used to evaluate certain personal aspects relating to a living individual? *In particular, to analyse or predict aspects concerning that person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements*	**YES or NO**	**NO**
9	Does your project include any partners which are third parties outside of DCU? *e.g. Research partners, third party software providers or other providers such as translation or transcription services, etc.*	**YES or NO**	**NO**

10 (a)	Does your project involve the sharing or processing of Personal Data outside the EU or the EEA? *i.e. the EEA is the European Economic Area (the EU plus Norway, Liechtenstein and Iceland)*	**YES or NO**	**NO**
10 (b)	If 'Yes', please state which non-EU or EEA country is involved:		
11	Does the project require the matching or combining of separate datasets of information on individuals in a way that would exceed their reasonable expectations of privacy? *An example would be combining mobile phone location data along with any other dataset to identify individuals.*	**YES or NO**	**NO**

If you answered 'Yes' to one or more of these questions, you should make sure that you have strong and secure data privacy risk mitigation safeguards in place, discuss these with your supervisor.

4.2   WILL ANONYMISATION OR PSEUDONYMISATION OF THE PERSONAL DATA, WHERE APPLICABLE, BE UNDERTAKEN?

Anonymisation is the process of removing personal identifiers, both direct and indirect, that may lead to an individual being identified. Pseudonymisation is the processing of personal data in such a manner that the personal data can no longer be attributed to a specific living individual without the use of additional information, provided that such additional information is kept separately and is subject to technical and organisational measures to ensure its security.

YES or NO
NO

If YES, please explain below the methods by which you intend to anonymise/pseudonymise the personal data:

5.   DATA/SAMPLE STORAGE, SECURITY AND DISPOSAL

For the purpose of this section the term 'Data' includes personal data that is in a raw or a processed state (e.g. interview audiotape, transcript or analysis, etc.). The term 'Samples' include body fluids and/or tissue samples.

5.1   HOW AND WHERE WILL THE DATA/SAMPLES BE STORED?

DCU recommends that any data stored electronically offsite should utilise the DCU Google Drive. Alternative offsite storage will need to be justified and must meet data protection and GDPR compliance requirements.

The responses to our survey will be stored in the DCU Google drive, along with the Google Form we created.

5.2   WHO WILL HAVE ACCESS TO DATA/SAMPLES?

If people other than the main researchers have access, please name who they are and explain for what purpose.

The people who have access to the Google Form are the two of us doing the project, and our project supervisor, David Sinclair

5.3   HOW LONG IS THE DATA TO BE HELD OR RETAINED?

Note that, with very few exceptions, Personal Data may not be retained indefinitely. It is up to the project team to establish an upper retention limit for each category of Personal Data used within the project and to ensure it is applied at the expiry of that limit. The School of Computing Research Ethics Committee recommends that Personal Data is retained until after the resit Pab for the current academic year.

This data will be retained until the end of the DCU academic year 2020/2021. We will hold onto this data as recommended by the School of Computing Research Ethics Committee until after the resit Pub for the current academic year. However, the specific date is not defined on the DCU website, due

to the COVID-19 pandemic. The most accurate date we can give, according to the DCU website, is October 2021.

5.4   IF YOUR PROJECT DOES INVOLVE THE USE OF PERSONAL DATA THEN WILL THIS BE USED AT A LATER DATE FOR THE PURPOSE OF PUBLICATION OF THE RESULTS OF THE PROJECT?

YES or NO
…
N/A

5.5   IF THE DATA/SAMPLES ARE TO BE DISPOSED OF AT THE END OF THE PROJECT PLEASE EXPLAIN HOW, WHEN AND BY WHOM THIS WILL BE DONE?

How will the data/samples be disposed of? Please describe the means by which the personal data will be deleted or destroyed. This includes personal data held in hard copy and digital formats.	We will not have any hard copies of this survey. The only copy available will be the Google Form, which ties the responses to it. When it is time to dispose of this form and the responses, all traces of the form will be permanently deleted from the DCU Google Drive and from the Recycling Bin on the drive.
By whom will the data/samples be disposed? Please indicate the designated team member(s) with responsibility for deletion and/or destruction of the research project's personal data.	As Harley Martin owns the account in which the form was created, she will permanently delete all traces of the Google Form and its responses form the DCU Google Drive, and from the recycling bin in her account.

6. PLAIN LANGUAGE STATEMENT *(Attach to this document. Up to a max of 400 words)*

PLEASE CONFIRM WHETHER THE FOLLOWING ISSUES HAVE BEEN ADDRESSED IN YOUR PLAIN LANGUAGE STATEMENT/ INFORMATION SHEET FOR PARTICIPANTS:
Note that this list is a check-list of all of the things that you should include in your plain language statement, if they are relevant (they are in most cases). In the earlier sections of this form you have already written the text that can be used to create your plain language statement. References to the relevant sections are provided on each line.

	YES or NO
Introductory Statement (Student(s) and supervisor names, school, title of the project) [Table, p 1]	YES
What is this project about? [section 2.1]	YES
Why is this project being conducted? [section 2.1]	YES
What will the participant be expected to do/have to do if they decide to participate in the study?[section 2.1]	YES
How will their privacy be protected? [section 2.5, section 2.6]	YES
How will the data be used and subsequently disposed of? [section 5.3]	YES
What are the legal limitations to data confidentiality? [section 2.7]	YES
Are there any benefits of taking part in the study? [section 3.3]	YES
Are there any risks of taking part in the study? [section 3.2]	YES
Confirmation that participants can change their mind at any stage and withdraw from the study [see plain language statement template, appendix 1]	YES
How will participants find out what happens with the project? [section 2.9]	YES
Contact details for further information [see plain language statement template, appendix 1]	YES

If any of these issues are marked NO, please justify their exclusion:

7. INFORMED CONSENT FORM *(Attach to this document. Approx. 300 words, see appendices 2 and 3 for templates.)*

NB – IF AN INFORMED CONSENT FORM IS NOT BEING USED, THE REASON FOR THIS MUST BE JUSTIFIED HERE.

Our survey does not gather any personal data from its participants.

8. ASSENT FORM & PLAIN LANGUAGE STATEMENT FOR CHILDREN *(Attach to this document.)*

NB – IF AN ASSENT FORM IS NOT BEING USED, THE REASON FOR THIS MUST BE JUSTIFIED HERE.

We are not asking children to respond to our survey.

9. SUBMISSION CHECKLIST *(Attach to this document)*

Please confirm that all supplementary information is included in your application (in electronic copy). If questionnaire or interview questions are submitted in draft form, please indicate this by putting (draft) after YES. A copy of the final documentation must be submitted for final approval when available.

My application has been collated as one electronic PDF file which includes the following documentation:	INCLUDED (mark as YES)	NOT APPLICABLE (mark as N/A)
Recruitment advertisement [consistent with section 2.3]	YES	
Plain language statement/Information Statement [see section 6 and appendix 1]	YES (draft) (appendix 4)	
Informed Consent form [see appendices 2 and 3]	YES (appendix 5)	
Informed Assent form (children only)		N/A
Evidence of external approvals related to the research [see sections 1.1 and 2.10]	YES	
Questionnaire/Survey	YES (draft appendix 6)	
Interview/Focus Group Questions		N/A

Appendix 1
DUBLIN CITY UNIVERSITY
Sample Template – Plain Language Statement (Up to a max of 400 words)

A Plain Language Statement (PLS) should use language that reflects the participant age group and corresponding comprehension level. It should contain the following information. The headings are there for guidance and do not need to be included in your form.

Introduction to the Study
Identify the Study Title, the university department involved, the student(s) and supervisor

Data Protection/Privacy Notice (Personal Data – GDPR Compliance)
An appropriate Privacy Notice is the means by which data subjects are informed about the use of their data. If personal data is being collected and processed, please refer to https://www.dcu.ie/ocoo/dp/guides.shtml for advice and include the following information in the PLS:

- *The identity of the Data Controller/Joint Data Controller and Data Processor should be clearly. stated. The Data Controller will always be DCU (where the researcher is a DCU researcher), the PLS should identify this and also the name of the project, team and School/Unit. A data processor may hold or process personal data but does not exercise responsibility for or control over the personal data, for example, a transcription service, or a software or cloud hosting company. A Data Processor cannot be an employee of the Data Controller.*
- *The identity of the DCU Data Protection Officer – Mr. Martin Ward (data.protection@dcu.ie Ph: 7005118 / 7008257)*
- *The purpose of the data processing i.e. the reasons why the data is being requested and the purpose to which it will be applied.*
- *The reason(s) for which the data will be processed or held*
- *The categories or types of personal data to be processed*
- *The details of any third parties (i.e. data processors) with whom the data will be shared or transferred, and the reasons for sharing*
- *The details of any external (i.e. non-DCU) parties with whom the data will be shared or transferred, and the reasons for sharing*
- *Where relevant, details of any intention to transfer the data to other countries, especially if outside of the EEA (European Economic Area), and the basis for such transfers*
- *The retention period, or the criteria used to determine retention periods*
- *The right of the individual to lodge a complaint with the Irish Data Protection Commission*
- *Information on the rights of the data subject - Individuals' have the right to access their own personal data and PLS should inform them how to do this and who to contact (DCU Data Protection Unit).*
- *Information on their rights to withdraw consent and who to contact to withdraw consent. In some cases it may be possible for participants to withdraw their consent to the use of their data*
- *If it is intended that the data be used for future studies, you must specify the general parameters of the future further project uses to which the participant's project data may be put.*
- *In cases where personal data will later be anonymized (e.g. for statistical or aggregated data), it is best practice to describe this, so that the participant is fully informed.*

Advice as to whether or not data is to be destroyed after a minimum period
Define when data will be destroyed after the end of the project

Details of what participant involvement in the Study will require
E.g., involvement in interviews; completion of questionnaire; audio/video-taping of events, and the estimated time commitment for the activities

Potential risks to participants from involvement in the Study (if greater than that encountered in everyday life)

Any benefits (direct or indirect) to participants from involvement in the Study

Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations
Participants need to be made aware that confidentiality of information provided cannot always be guaranteed by researchers – please include the following statement:
"Confidentiality of information can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions".
Depending on the project proposal and academic discipline, you may need to state additional specific limitations.

Statement that involvement in the Study is voluntary
State that participants may withdraw from the Study at any point. You should explain to the participant that their participation in the project will end, at the point they withdraw, and refer back to the data protection/privacy notice as to what will happen regarding their data. For example, withdrawing consent may mean that no future data collection will take place but previously collected data will still be processed etc.

Any other relevant information – e.g.
- *if the sample size is small, advice to participants that this may have implications for privacy/anonymity*
- *if participants are in a dependent relationship with any of the researchers, a clear statement that their involvement/non-involvement in the project will not affect their ongoing assessment/grades/management*

A Plain Language Statement must end with the following statement:

If participants have concerns about this study and wish to contact an independent person,
please contact:
The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000, e-mail rec@dcu.ie

Appendix 2
DUBLIN CITY UNIVERSITY

Sample Template – Informed Consent Form (approx. 300 words)

An Informed Consent Form should generally contain the information detailed below. It should be written in the first person, e.g. "I will be asked to attend…I may withdraw from the study at any point…..I am aware that the data…etc." The headings are there for guidance and do not need to be included in your form.

Study Title
Also identify the school/centre involved, the principal investigator and any other investigators.

Clarification of the purpose of the study
If personal data is being collected and processed, please ensure that the participants acknowledge the identity of the data controller and the purposes of the processing for which the personal data are intended

Confirmation of particular requirements as highlighted in the Plain Language Statement
Requirements may include involvement in interviews, completion of questionnaire, audio/video-taping of events etc.. Getting the participant to acknowledge requirements is preferable, e.g.

> *Participant – please complete the following (Circle Yes or No for each question)*
> *I have read the Plain Language Statement (or had it read to me)*   *Yes/No*
> *I understand the information provided*   *Yes/No*
> *I understand the information provided in relation to data protection*   *Yes/No*
> *I have had an opportunity to ask questions and discuss this study*   *Yes/No*
> *I have received satisfactory answers to all my questions*   *Yes/No*
> *I am aware that my interview will be audiotaped*   *Yes/No*

Confirmation that involvement in the Study is voluntary
E.g.I may withdraw from the Study at any point.

Confirmation of arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations

Confirmation of arrangements regarding retention/disposal of data

Confirmations relating to any other relevant information as indicated in the PLS
E.g. I consent to the use of my data for future studies within the following parameters (provide detail)

<u>Signature:</u>

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this project

Participants Signature:

Name in Block Capitals:

Witness:

Date:

Appendix 3
Anonymous Online Consent Form Template

In cases where an anonymous questionnaire is being used, researchers are required to provide a separate tick box for each statement that the participant is being asked to consent to/acknowledge. Each statement must be included as an essential field in order to ensure that full informed consent has been obtained. (see example below).

An Informed Consent Form should generally contain the information detailed below. It should be written in the first person, e.g. "I will be asked to attend…I may withdraw from the study at any point…..I am aware that the data…etc." The headings are there for guidance and do not need to be included in your form.

Study Title
Also identify the school/centre involved, the supervisor and any students.

Clarification of the purpose of the study

Confirmation of particular requirements as highlighted in the Plain Language Statement
Getting the participant to acknowledge requirements is mandatory, Participants should not be able to access the survey until they have agreed to all items and indicated their consent.

Example:

Participant – please complete the following (by clicking Yes/No for each question)

I have read the Plain Language Statement (or had it read to me) *

● Yes
○ No

I understand the information provided *

○ Yes
○ No

I have had an opportunity to ask questions and discuss this study *

○ Yes
○ No

I understand the information provided in relation to data protection *

○ Yes
○ No

I have received satisfactory answers to all my questions *

○ Yes
○ No

I understand I may withdraw from the Research Study at any point *

○ Yes
○ No

I have read and understand the arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations *

○ Yes
○ No

I have read and understand confirmations relating to any other relevant information as indicated in the PLS *

○ Yes
○ No

I consent to participate in this research study *

○ Yes
○ No

Appendix 4

Plain Language Statement

Our project is the design and development of a workload measurement system for nurse and nurse management staff.

Our system will require nurses to record tasks completed for patients and select associated levels of difficulty relating to them. This information will be stored and calculated to give an overall workload score. This workload score will be displayed to nurse management to represent the current workload required and hence help to quickly identify if a ward is overwhelmed and reallocation of nurses is needed. Additional data analysis is undertaken to identify any patterns and trends recurring and to create possible predictions and probability for future ward workload.

The name of our survey is Nurse Workload Measurement System. This survey is a small part of a final year project by two students studying B.Sc in Computer Applications and Software Engineering in DCU's School of Computing. The project team consists of Ruth Leavey and Harley Martin who are doing the project, and their supervisor Dr David Sinclair, also of DCU's School of Computing. The data retrieved from this survey will be controlled by DCU, and processed by DCU and Google, as the survey is in the form of a Google Form, and the survey and responses are retained in DCU's Google Drive.

The purpose of this survey is to gain meaningful insight into a part of the nursing domain. Participants in this survey will be required to answer the 12 questions in our survey, which should take approximately 5 minutes to complete. This will involve giving their professional judgement and opinion on workload measurement systems similar to ours and on the details of our proposed workload measurement system.

The purpose of this data processing (ie. the reason we are requesting responses to this survey and the purpose for which they will be applied) is to get an understanding of the needs of nursing staff in relation to workload measurement systems similar to the one our project proposes. The project team wants answers to the questions we asked so that we can ensure we are creating a system that provides solutions that nursing staff want and need. The responses to this survey will be processed and retained for the purpose of assessment of our project. Our assessors will need to see this information so that they can have proof that we built a system that fits the needs of real nursing staff.

Participation in this survey is voluntary. Participants do not benefit from their involvement. There are no risks in participation. Participants will not be notified of the success of the project. Our survey is completely anonymous so no personal data will be processed or retained from participants. This data will not be used for any future studies outside of the domain of our final year project. Participants may withdraw from the survey at any point if they wish, and their involvement in the survey will end at the point they withdraw and their data will not be processed or retained. Confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.

DCU and Google are the only parties that will process this information as this is a DCU run project and our survey and responses are retained in DCU's Google Drive. This data will not be shared with or transferred to any other countries. There will be only one digital copy of this data retained until the end of the retention period and no hard copies will ever be created. The data will be retained until October 2021, the end of the current DCU academic year. After that this data will be disposed of by deleting all traces of it from DCU's Google Drive. Any individual participating in this survey has the right to lodge a complaint if they wish with the *Irish Data Protection Commission*.

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000, e-mail rec@dcu.ie

Appendix 5

Informed Consent Form (to be included in survey)

I have read the Plain Language Statement (or had it read to me)
_ Yes
_No

I understand the information provided
_Yes
_No

I have had opportunity to ask questions and discuss the study
_Yes
_No

I understand the information provided in relation to data protection
_Yes
_No

I have received satisfactory answers to all my questions
_Yes
_No

I understand I may withdraw from the Research Study at any point
_Yes
_No

I have read and understand the arrangements to be made to protect confidentiality of data , including that confidentiality of information provided is subject to legal limitations
_Yes
_No

I have read and understand confirmations relating to any other relevant information as indicated in the PLS
_Yes
_No

I consent to participate in this Research Study
_Yes
_No

APPENDIX 6

Draft survey questions
*Please note: Before these questions, the PLS and the IC from above will occur.

1. Please select the occupation title which applies to you. If Other, please explain.
   Nurse
   Nurse manager
   Nurse director
   Other:_____

2. With your best judgement, how often would sudden workload changes in a ward generate the need for additional resources (staff)?
   A few times a day
   A few times a week
   A few times a month
   A few times a year
   This never happens
   I don't know
   Other: _____

3. What is your hospital's current method for identifying when these workload changes happen? ie. the current method for detecting the need for additional resources (staff) in a ward?
   manual (based on observation/verbal communication/professional judgement/paper written)
   computer based
   A mix of both of the above
   None of the above
   I don't know

4. If you answered 'A mix of both', please expand to give us some understanding of the process.

5. On a scale of 1 to 5, how satisfied are you with your hospital's current method? 1 being not satisfied at all, 5 being completely satisfied.

6. Please outline the strengths/advantages of your hospital's current method.

7. Please outline the weaknesses/disadvantages of your hospital's current method.

8. Please outline any features you would add to/remove from your hospital's current method.

9. Please read a little more about our proposed system before answering the final questions.
   How nurses will use our system:
   Nurses would record each task from the patient's care plan in our system.
   The tasks (items) would appear on the screen and a nurse would select the level of effort required alongside the task they just completed. The system would calculate a workload score for each patient, which would indicate how much work would have been done for this patient. The system would combine each patient's score to create a score for the ward.

   How management staff will use our system:
   Management staff would be able to view the current score of each ward, and of each patient in a given ward, in real time. With this, they would see if a ward is very busy and may need additional staff allocated there from a quieter ward. Management would also be able to view statistical graphs displaying the scores of different wards over time, in the last week, the last month, the last year etc. This would allow them to discover trends and patterns in workload demands for future planning.

10. On a scale of 1 to 5, how helpful might you find our proposed system? 1 being not helpful at all, 5 extremely helpful.

11. The main goal of our proposed system is to calculate a workload score to indicate how busy a ward is in real time. Would you find this workload score beneficial?
    Yes
    No

12. What feature(s) of our proposed system would you consider to be strengths/advantages ? You may select more than 1.
    real time information
    workload score
    justifies the resourcing of staff
    discover workload patterns/trends
    future planning

informed skill mix utilization (discovering task X is often performed in ward A and training staff accordingly)
I do not see any of these as strengths
Other: _____

13. Please propose any other features you can think of that could further enhance the system we are creating.