DCU
Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

**School of Computing**
**RESEARCH ETHICS COMMITTEE**

# APPLICATION FORM FOR ETHICAL REVIEW OF A RESEARCH PROJECT INVOLVING HUMAN PARTICIPANTS WHICH IS IN THE CATEGORY OF NOTIFICATION ONLY

There are 3 generally accepted levels of ethical review for projects carried out in a University or similar setting. These are notification only, expediated and full committee.

This notification only level of review is to approve relatively low-risk research involving human participants, primarily using social science methodologies in which any personal information collected is not of a sensitive nature. The School of Computing Research Ethics Committee has been delegated responsibility by the University to approve ethics submissions from undergraduate and taught Masters projects only, which are in the category of notification only.

Examples of projects in this category include:

- Anonymous surveys in which the topic itself is not likely to elicit significant difficulties for the participants, such as: anonymous internet surveys (e.g. Survey Monkey), street questioning.
- Observation (without audio or visual recording) of public settings where privacy would not normally be expected, such as observing people on streets or at sports events.
- Research carrying no risks beyond those of everyday life (as experienced by the intended participant population), such as asking people's opinions about products or services; asking students about educational experiences; monitoring the impact of daily activities.
- Interviews with public figures, professionals or others in their professional capacity regarding their professional activities.
- Analysis of data (e.g. health records) which have had all identifying information removed by the data holder and been provided to the researcher in accordance with data protection legislation.
- Collection of biological samples which are anonymised and do not require invasive techniques (e.g. hair, nails).

If your project is using data from a public repository like Kaggle or is not generating or using any form of personal data then you do not need research ethics approval, you do not need to complete and to submit this form and your project supervisor should indicate this on the project dashboard.

If your project involves collecting or processing personal data which is of a personal nature, you must first complete the DCU online Data Protection training course and review the "Data Protection – Key Points for DCU Researchers" guidance from the Data Protection Unit to assist you in meeting your legal obligations under GDPR and associated Irish law.

Once you have completed this form (if you need to) you should save it as a PDF file, not WORD, and upload it to the your project dashboard before you start gathering data. It will then be read and assessed by two members of the committee and once two members of the committee approve your submission you will be automatically notified by email and your project can start data gathering.

There are strict deadlines for submitting this form for each class group, undergraduate and taught Masters by which your submission must be made and you will be informed of these deadlines by your course board chair or project co-ordinator. If you do not submit by these deadlines then the research ethics committee is not obliged to approve your submission and when that happens and your project is assessed and graded at the end of the year, you will be awarded 0 for that component of your project.

## SECTION 1 – GENERAL DETAILS

### 1.1 Project Title

| |
|---|
| Minerva |

### 1.2 Applicant Details

| Name | Student or Supervisor | E-mail |
|---|---|---|
| Gareth Hogan | Student | gareth.hogan22@mail.dcu.ie |
| Jack Farrell | Student | jack.farrell82@mail.dcu.ie |
| Gareth Jones | Supervisor | gareth.jones@dcu.ie |

Other Investigators: *Including any external to DCU*

| Name | School/Unit/External Institution | E-mail |
|---|---|---|
| | | |
| | | |
| | | |

### 1.3 Key Project Dates

| Proposed start date for data collection | Proposed end date for data collection | Proposed project completion date |
|---|---|---|
| 1/3/2024 | 14/4/2024 | 21/4/2024 |

### 1.4 Please indicate which academic award

| | |
|---|---|
| Undergraduate ☒ | Taught Masters ☐ |

### 1.5 Please confirm the location(s) where the research will be carried out

*If research will be carried out abroad, you will need to address the ethical challenges raised by this in Section 3 of your application - consult the Conducting Research Abroad document in the Ethics Resources and Guidelines section of the DCU Research Ethics webpage).*

| |
|---|
| DCU |

### 1.6 Please state what additional permissions may be required to access participants.

*Specify from whom the permission is required (e.g. a school Board of Management), and when their written approval will be obtained*

| |
|---|
| N/A |

## SECTION 2 – PROJECT DESIGN AND METHODOLOGY

Research Overview - Please respect the indicated word counts in the following sections and explain all acronyms in full text the first time they appear.

**2.1 Provide a brief description of the research (max 250 words):**
*Please use lay language, include the scientific/theoretical background of study and a justification as to why this research project should proceed in that context.*

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|---|
| The aim of this project is to provide a simple non-technical interface for users unfamiliar with database technologies or query languages who want to access databases, we have developed Minerva as a conversational chatbot solution to this problem.<br>This research aims to evaluate Minerva against users, see how well the system performs and if it fulfils user expectations, participants will be asked to complete a short demonstration of Minerva during with their prompts and Minerva's responses can be logged for reviewing, they will be performing some basic tests using the system and trying out the features, after this they will complete a short anonymous survey on their experience. The objective of this survey is to identify defects and things that users do not like about Minerva so we can fix them, we also will ask participants to describe prompts that Minerva did not understand so we can collect synonyms and varied ways users could say things and add them to our training data. |
| |

**2.2 Please state the aims and objectives of the project (max 200 words)**

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|---|
| Our project is a database access chatbot called Minerva, it will allow users with little database experience to query and retrieve data from large databases easily by conversing with Minerva. Users will interact with Minerva through a web application chat interface, submitting queries and questions, the results of their queries would be displayed back to them through the same interface. The system is being developed as a solution for non-technical users to be able to utilise and access the vast potential of large databases without knowledge of technologies like SQL. Minerva will provide a conversational interface that most users should find intuitive and easy to use to access large databases that they might be working with, such as financial data for accountants, or medial records for nurses or doctors. Through Minerva these types of users could query databases for specific sets of data depending on their needs, sets that would have been hidden or lost in large amounts of irrelevant data in huge databases. |

**2.3 Please confirm your methods of data collection:**
*Tick all relevant check boxes and provide details for each one, including any devices used to collect data, and whether the data will be anonymous, potentially identifiable or identifiable <u>at point of collection</u>*

| Method | Describe briefly |
|---|---|
| ☐ Interviews or focus groups | |
| ☒ Surveys/questionnaires | Participants will be asked to complete an anonymous online survey on google forms |
| ☐ Audio/video recordings | |
| ☐ Public observations | |
| ☐ Persons in public office | |

| | |
|---|---|
| ☐ Using existing data (incl. secondary data) | |
| ☐ Using human derived material (biological samples) | |
| ☐ Standard tests (educational/personality etc.) | |
| ☐ Standard educational practices | |
| ☐ Other (please specify) | |

**2.4 Please confirm who the participants on this study will be, including group size and composition:**
*Include associated demographic characteristics, and state how your proposed sample size was determined (e.g. power analysis)*

| |
|---|
| The participants in this study will consist of friends and fellow students with ages of 18 and up, we aim to collect survey answers from at least 10 participants. |

**2.5 Please outline your recruitment process, including where you are sourcing participants from and your criteria for inclusion/exclusion:**
*Where gatekeepers are involved, outline the procedures relating to their involvement*

| |
|---|
| Participants will be approached by one of us and asked if they would like to participate and what is involved in the survey. We will source participants from fellow students in our course that we are familiar with. |

**2.6 Addressing participant vulnerability – if your participants fall into any of the following categories, please check the relevant tick box/boxes and state below what special arrangements will be made to protect them:**
*If your participants are not in any of these categories, tick N/A*

| |
|---|
| ☒ N/A |
| ☐ Children under 18 years of age |
| ☐ Persons in unequal relationships with the researcher *(e.g. lecturer-student, therapist-client, employer-employee)* |
| ☐ People with a recognised or diagnosed intellectual, physical or mental impairment |
| ☐ People confined to institutions *(e.g. prisoners, residents in 24 hr nursing facilities)* |
| ☐ People who have undergone traumatic or adverse emotional events |
| ☐ People with diminished cognitive ability |
| ☐ Marginalised sections of society |
| ☐ Other (please specify) |

| ***Special arrangements:*** |
|---|
| |

**2.7 Involvement of children under 18 years of age – if your participants are in this category, please confirm compliance with the following:**
*If your participants are not in this category, tick N/A*

| |
|---|
| ☒ N/A |
| ☐ We confirm that we have read and agree to act in accordance with the DCU Child Protection policy and procedures (*as per the DCU Child Protection Unit webpage*) |
| ☐ We confirm that we have put in place safeguards for the children participating in the research |
| ☐ 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 research) |
| ☐ We confirm that all requirements will be met prior to commencing the research *(e.g. TUSLA Children First Training completed, Garda Vetting in place)* |

**2.8 Please confirm how the results of the research will be disseminated:**
*Include a statement on whether the participants will be provided with any information as to the findings or outcomes of the project*

| |
|---|
| Results will be shared with our project supervisor and will be analysed and the findings will be shown in our project documentation and demonstration. |

## SECTION 3 – ETHICAL ISSUES AND RISK MANAGEMENT

**3.1 Please identify all issues including ethical issues which may arise in the course of this research. What are the potential risks to participants, and how will those risks be addressed or minimised?**

*Potential risks can be physical, psychological, social, legal, etc. Please include details of any additional support being provided for participants during/after the study*

| |
|---|
| The state level of risk is notification only, we will only be asking participants for their opinions and thoughts on the project via an anonymised survey, no personal information will be taken or stored in the results of the research. |

**3.2 Please identify the potential benefits (direct and/or indirect) to those participating in this research:**

*Potential benefits should outweigh the potential risks to participants*

| |
|---|
| There are no likely benefits. |

**3.3 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 research:**

| |
|---|
| We agree to meet regularly with out supervisor who will monitor the project and help deal with any unexpected outcomes and provide support during the project. |

**3.4 Do you intend to provide payment or incentives to participants?**

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please consult the REC Guidelines on the Use of Compensation and Incentives (in the Ethics Resources and Guidelines section of the DCU Research Ethics webpage) before providing additional details below*

| |
|---|
| |

**3.5 Does this research raise any potential risks for the researchers themselves?**
*Please consider the location/environment where the research is being conducted, exposure to distressing data content etc.*

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please describe further and explain what risk management procedures will be put in place to minimise these risks to researchers:*

| |
|---|
| |

**3.6 Does this research raise any potential conflict of interest?**
*Please consider any potential real or perceived conflicts of interest that might influence the integrity of the research, or give rise to bias in conducting and reporting the research, or affecting publication (consult the DCU Conflict of Interest Policy for assistance)*

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please identify and explain the steps being taken to address that conflict:*

| |
|---|
| |

**3.7 Please describe how the conduct of the research will be monitored:**
*Regular oversight by the PI is required to ensure the project conforms to the procedures set out in this application (especially where several people are involved in carrying out the research procedures)*

| |
|---|
| Our supervisor will be reviewing all forms, surveys and questions before we use them in the research. |

## SECTION 4 – CONFIDENTIALITY AND DATA MANAGEMENT

**4.1 Considering your previous response in section 2.3 of the form on data collection, please confirm whether you are collecting or processing personal data in this research project:**
*Personal data is any information about a living person, where that person is either identified, or could be identified from the data itself, or when it is combined with other data. This includes paper based, electronic and biological samples data. If your data is fully and completely anonymous, it is not personal data.*

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please confirm your compliance with the following by ticking the checkboxes:*

| |
|---|
| ☐ We confirm that we have completed the DCU Data Protection training module on Loop. |
| ☐ We confirm that we have read the "Data Protection – Key Points for DCU Researchers" guidance on the DCU Data Protection Unit (DPU) website and agree to protect and manage our data in accordance with same. |
| ☐ We have assessed the degree of risk inherent in the personal data being used in the research project, and confirm that all DPU GDPR requirements have been met prior to submitting this application *(e.g. completion of Data Protection questionnaire, confirmation that any survey tool being used is GDPR compliant, that required Data Processing or Sharing Agreements will be in place, etc.)* |

**4.2 Data access – please confirm whether access to participant data is confined to the investigators named on this application:**

| | |
|---|---|
| Yes ☒ | No ☐ |

*If No, please name who the other individuals are and why they need access. Any proposed transfer of data (including outside of the EU) should be detailed here.*

| |
|---|
| |

**4.3 Data storage – please confirm compliance with the following:**

| |
|---|
| ☒ Data collected on mobile devices will be protected with a strong password/passphrase at a minimum, and/or encrypted if the device supports it |
| ☒ Data will be removed from mobile devices as soon as is practicable and stored in a secured location in DCU (on server or institutional Google Drive) |
| ☒ Paper based data will be held securely in locked cabinets in DCU, with access restricted to the named researchers |
| *Specific arrangements in relation to biological samples should be stated here:* |
| *Any exemptions to the above compliance statements should be justified here:* |

**4.4 Please confirm who will be responsible for the secure storage of data generated by the research:**

*Name the relevant DCU investigator/s*

| |
|---|
| Gareth Hogan |

**4.5 Please confirm how long the data will be held for:**

*For personal data, consult section 15: Retention of Personal Data in the "Data Protection – Key Points for DCU Researchers" guidance on the DCU Data Protection Unit (DPU) website*

| |
|---|
| Data will be retained until after the progressions and awards board of the current year. |

**4.6 Please confirm what will happen to the data collected at the end of the study:**

*Please tick the relevant checkbox and complete the associated follow-up section for that category*

| | | |
|---|---|---|
| Archived ☐ | Destroyed ☒ | Other ☐ |

**4.6.1 Archived data**

*Please provide the following details:*

| | |
|---|---|
| Name the DCU staff member responsible for archival and future use of data | |
| Confirm whether the data will be made available to other researchers, and if so, how? | |
| Confirm how the data will be prepared for archive (e.g. will datasets be anonymised) | |
| Confirm where the data will be archived and who will be allowed to access it | |

**4.6.2 Destroyed data**

*Please provide the following details – Note: for student projects, the supervisor must take responsibility for data destruction if there is no guarantee the student will have access to the data at the time of destruction*

| | |
|---|---|
| Please justify why the data will be destroyed | There is no more need for the data and it will not be of use to any further research |
| Name the DCU researcher responsible for destruction of data | Gareth Hogan |
| Confirm when the data will be destroyed (specify date) | 1/6/2024 |
| Confirm compliance with the following destruction methods (tick relevant boxes) | ☒ Electronic data will be overwritten/securely deleted<br>☐ Paper based data will be confidentially shredded<br>☐ Medical samples will be disposed in accordance with the relevant DCU approved SOP |

### 4.6.2 Other - Please explain what will happen to the data if not being archived or destroyed:

| |
|---|
| |

## SECTION 5 – PARTICIPANT INFORMATION AND INFORMED CONSENT PROCEDURES

**In addition to completing this form you are required to attach, within the single PDF that you submit, a copy of (1) the Participation Information Sheet which you share with your participants and (2) a copy of the Informed Consent Form which your participants sign.**

**5.1 Please confirm that the following items have been addressed in your Participant Information Sheet which should be shared with all participants whether it involves online or in-person data gathering:**

*The items below should be used as headings in your information sheet. Note the language used under each item must reflect the participant age group and corresponding comprehension level– if your participants have different comprehension levels (e.g. both adult and child participants) then separate sheets must be prepared for each set. Templates are available via the REC Forms - Applications, Templates and Amendments section of the Research Ethics website.*

| Checklist – tick the relevant check box for each item | Yes | No |
|---|---|---|
| Introductory Statement (Researcher names and titles, school, title of the research study) | ☒ | ☐ |
| What is this research about? | ☒ | ☐ |
| Why is this research being conducted? | ☒ | ☐ |
| Why have you been invited to take part? | ☒ | ☐ |
| What will happen if you decide to take part in this research study? | ☒ | ☐ |
| How will your data be used? | ☒ | ☐ |
| How will your privacy be protected (including any legal limits to confidentiality)? | ☒ | ☐ |
| What are the benefits of taking part in this research study? | ☒ | ☐ |
| What are the risks of taking part in this research study? | ☒ | ☐ |
| Can you change your mind at any stage and withdraw from this study? | ☒ | ☐ |
| How will you find out what happens with this project? | ☒ | ☐ |
| Contact details for further information | ☒ | ☐ |

*If you marked any item as No, please explain and justify why:*

| |
|---|
| |

**5.2 Informed Consent Procedures – please confirm whether written consent is to be obtained:**
*Please tick the relevant checkbox*

| | |
|---|---|
| Yes ☒ | No ☐ |

*If Yes, describe the procedures by which written consent will be obtained. If you are involving child participants, you will also need to obtain their written assent. Templates are available via the REC Forms - Applications, Templates and Amendments section of the Research Ethics website.*

| |
|---|
| Participants recruited for this survey will all be over the age of 18, each will be asked to read the PLS and then have the opportunity to ask questions before agreeing to be part of the research and signing the informed consent form. |

*If No, describe the procedures regarding how consent/assent will be obtained:*

| |
|---|
| |

## SECTION 6 – SUBMISSION CHECKLIST AND RESEARCHER DECLARATION

### 6.1 Please confirm all required supplementary documentation to be included in this application within Section 7:

| Checklist – tick the relevant check box for each item | Yes | N/A |
|---|---|---|
| Participant Information Sheet/s | ☒ | |
| Informed Consent Form/s | ☒ | ☐ |
| Informed Assent Form/s | ☐ | ☒ |
| Recruitment Advertisement | ☐ | ☒ |
| Questionnaire/Survey | ☒ | ☐ |
| Interview/Focus Group Questions | ☐ | ☒ |
| Debriefing Material | ☐ | ☒ |
| Bibliography | ☐ | ☒ |
| Approval from another Research Ethics Committee | ☐ | ☒ |
| Evidence of other external approvals (e.g. Board of Management letter) | ☐ | ☒ |
| Evidence of internal approvals (e.g. BSC approval review letter) | ☐ | ☒ |
| Other – provide details here: | ☐ | ☒ |

### 6.2 Signed Declaration

*By submitting this form, the applicant (and supervisor) agree to the following:*

*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 guidance and resources, the University's Conflict of Interest Policy, its 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 research that may arise in conducting this research and acknowledge my obligations and the rights of the participants.*

*I also acknowledge my requirement to be informed as to other duties and legal obligations applying to my research, and to comply with these duties and obligations – this includes being informed about DCU Data Protection guidelines for researchers, DCU Child Protection policy and procedures (where relevant) and DCU Insurance requirements.*

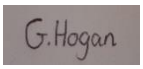
*I and my co-investigators and/or supporting staff have the appropriate qualifications, experience and facilities to conduct the research set out in the attached application and to deal with any emergencies and contingencies related to the research that may arise. Research will not commence until required consents and approvals are in place.*

**Electronic Signature(s):**

*Supervisor:* 

*Print Name here: Gareth Jones*

*Date: 14/03/2024*

*Student(s) signature(s):*  

*Print Name(s) here:* GARETH HOGAN, JACK FARRELL

*Date: 14/03/2024*

## SECTION 7 – SUPPLEMENTARY DOCUMENTATION

**Please attach all required documentation as confirmed by you in the previous section. The application should then be saved as one file in PDF format before submission via the project dashboard.**

**See below the attached documents**

1. Plain Language Statement
2. Informed Consent Form
3. Anonymous Online Consent Form
4. Questions for our Survey

# *DUBLIN CITY UNIVERSITY*

## Plain Language Statement

## Minerva – Research and Testing

Research conducted by Gareth Hogan and Jack Farrell
Supervised by Gareth Jones
DCU School of Computing

Minerva is a chatbot designed to enable users with little technical knowledge to access and utilise large and complex databases. Users can interact with Minerva through a web based interface, asking questions and submitting prompts that are transformed into database queries, the results to these queries are then displayed back to the user.

This study is being conducted to help understand how well the Minerva is performing, to identify any defects or bugs and language phrases (Synonyms, Slang, etc.) that Minerva does not interpret correctly. This study also hopes to gain opinions from participants on how the system feels to use, and any suggestions or feedback on the user experience.

**Data Protection/Privacy Notice**
During the study none of your personal data will be recorded. Any opinions or suggestions will be collected anonymously and will have no data links to you.

Information will be anonymised and protected to the full extent that we can however 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.

**Data Destruction Policy**
The feedback taken via the anonymous survey will be deleted at the end of this academic year by Gareth Hogan

**What the Study will involve**
If you decide to participate in the study, it will involve completing a short anonymous survey after seeing Minerva demonstrated or having the chance to interact with Minerva yourself.
You can choose to withdraw from the study at any time, at that point no further data or information will be recorded from you, however any data gathered up to that point will still be processed according to the data protection and privacy rules above.

**After the study**
The study results will not be published publicly, and we will not be in contact after you are done to update you on the studies progress, if you have any questions after the study is over, please contact one of the researchers.

***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

# *DUBLIN CITY UNIVERSITY*
## Minerva - Informed Consent Form

### Minerva – Research and Testing

Research conducted by Gareth Hogan and Jack Farrell
Supervised by Gareth Jones
DCU School of Computing

I understand that for the purposes of the study my responses to the survey will be recorded and kept until the end of this academic year. I also understand that none of my personal data will be collected during the process of this study.

I acknowledge that the data controller for this study is Gareth Hogan, and I should go to him with any questions or clarifications I need.

I understand that during this study I will be asked to complete an anonymous survey after watching a demonstration of the system or interacting with it myself.

I understand I can withdraw from this study at any time.

I understand that my information will be protected to the best extent possible within the limitations of the law as stated in the Plain Language Statement

| *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* |

**Signature:**

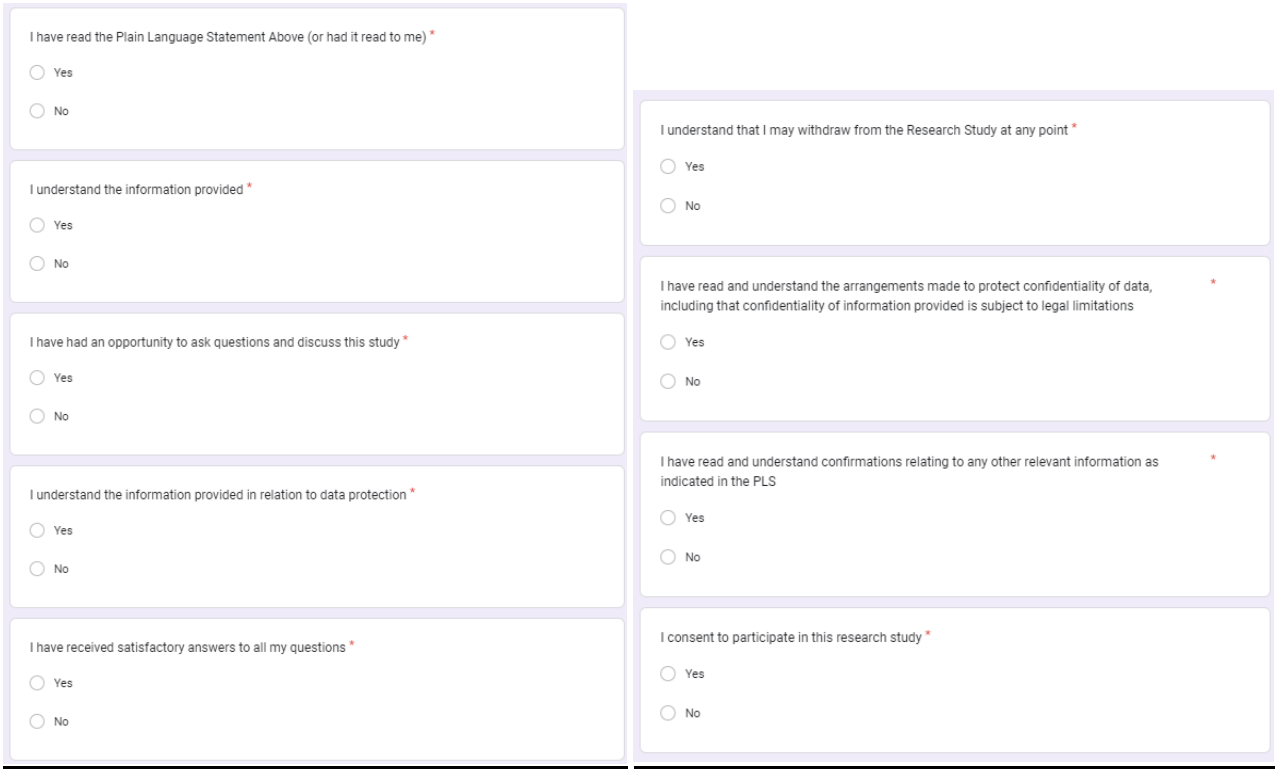
I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this project

**Participants Signature**: _____
**Name in Block Capitals**: _____
**Witness**: _____
**Date**: _____

## Anonymous Online Consent Form

[Plain Language Statement Displayed in Form]

Please answer yes or no to all the following questions to access the survey.




# Questions in our Survey:

## Task Section:

***Changing the database***

*In this demo, Minerva has two databases that can be switched between, the default is a medial database, can you switch to the financial database.*

1. How easy was this to do?

***Ask Minerva some questions***

*For this task, try and ask Minerva some simple questions to figure out the system, what is Minerva, how does Minerva work, what can she do, how do you submit a prompt?*

1. Input any questions that Minerva misunderstood or could not answer below:
2. How relevant was the information that Minerva responded with in terms of helping to understand the system and how to use it?
3. Are there any questions you believe Minerva should be able to answer, additional things she could explain?

***Submit a prompt to the database***

*Using the medical database (loaded by default), submit a prompt to retrieve data about "how many people are registered under 40"*

1. Were you able to get the data?
2. Was the data displayed in a clear and helpful format?
3. Any suggestions as improvements to the viewing of the data, or difficulties encountered trying to submit a prompt?

# Feedback Section:

1. Overall, how would you rate Minerva?
2. Do you think Minerva would help non-technical users access complex databases?
3. How much easier did Minerva make accessing the database for you?
4. How relevant was the data Minerva returned for prompts you tested?
5. If you had to access a database frequently as part of your job, would you like to use a system like Minerva to make it quicker and easier?
6. Any suggestions as to how to improve the system, features to add, things you would like to see/use?