

## Participant Information Sheet

### Researcher:

My name is Abhaas Goyal and I am an undergraduate student currently doing my Honours year at the Australian National University. My current degree is Bachelor of Advanced Computing (Honours) in the School of Computing, a subsidiary of the College of Engineering and Computer Science.

**Project Title:** Comparative Study of Traditional versus Capability-Based Module Systems for Modern Programming Languages

### General Outline of the Project:

- **Description and Methodology:** The goal of the project is to compare programmer productivity, security of the design, extensibility of packages, and other factors when solving problems in programming languages. In particular, we want to find out whether modules systems/packages having “capability-oriented design” provide advantages when compared with their absence. To solve this, we would be designing a set of tasks that can be given to experienced software engineers that will involve designing a small product architecture. We will ask one group to solve these using a language with support for modules and object capabilities and the other group to use a more traditional language.
- **Participants:** I intend to interview 10-15 students and researchers at the Australian National University, or in some cases other university students. They would be having a variety of backgrounds and have had relevant experiences. The participants will be recruited through an expression of interest form via online channels.
- **Use of Data and Feedback:** The data will be used for my Honours thesis. It would also be potentially used to publish peer-reviewed published articles and conference presentations. A summary of the results will be made available at [https://drive.google.com/drive/folders/1\\_H88qgyUhuOWGcYGls4uKNGeYgtVmLNI](https://drive.google.com/drive/folders/1_H88qgyUhuOWGcYGls4uKNGeYgtVmLNI)

### Participant Involvement:

Think about this section from the point of view of the participant. What would you wish to know before deciding whether or not to participate in a research project?

- **Voluntary Participation & Withdrawal:** Inform the intended participants that participation in the project is **voluntary** and that they may, without negative consequences, decline to take part or withdraw from the research without providing an explanation at any time until the work is prepared for publication (if the participant’s data is re-identifiable), or until data are submitted to the researcher (if no personal identifying details are collected, and participation is completely anonymous). Also inform the participants they can refuse to answer a question. Advise them that if they do withdraw, what will happen to their data. In the case of data drawn from individuals, it is usual that data from withdrawn participants will be destroyed and not used. For focus groups, isolating and destroying individual contributions may be impossible given the group nature of the discussion, so this should be advised if it is expected to be the case. You can give participants the option of allowing you to continue to use their data, but this should be opt-in.

A simplified-language version might express these ideas as “You do not have to be involved in this

research unless you want to, and you can pull out of the research if you change your mind without telling me why. If you do pull out, I will not use what you told me.”

- **What does participation in the research entail?** Describe what the participants will be asked to do: For example, complete a questionnaire, undertake an interview, participate in a focus group, and/or permit access to personal records. For interviews, focus groups and similar methodologies specify how the contribution of the participants will be captured. If information is to be audio-recorded by the researcher or video-recorded and then transcribed for analysis, indicate whether transcripts of the individual recording will be provided to each participant for perusal before the analysis is finalised. Advise that you will only video/audio if the participants consent to it. You should also indicate what you intend to do with the recordings and, in particular, provide advice about who will have access to them. Remember, you should describe what you will ask participants to do in enough detail that they are able to form *informed* consent to participate. So, for example, if the interview will involve sensitive questions, you should tell participants that this will be the case, and briefly explain the nature of these questions, so they can choose to be involved or not.
  - **Location and Duration:** Indicate where the research will take place (if the research is conducted online, this has to be disclosed as well), the number of occasions on which the participants will be required, and the length of time on each occasion. If the research requires multiple interactions, an estimate of the total time commitment is also useful. For example, interviews are expected to last about an hour, and the total time requested of you in this research is two hours.
- Remuneration:** If relevant, indicate that some remuneration or consideration for participation is to be offered (for example a payment or gift or course credit), state its nature and how it will be provided. If there is no remuneration (or if the remuneration is token – such as a cup of coffee), you can leave this section out. Note that it is unethical to offer remuneration that is so large as to constitute an incentive to participate in the research for those who would otherwise not want to do so. Also, the committee strongly advises against resorting to prize draws and lotteries. If you do wish to use a lottery, you must clearly describe how this lottery will be managed and prize winners chosen so that the operation of the lottery is seen to be transparent.
- **Risks:** Describe any **risks, discomforts, hazards or side effects** that might arise because of the subject of the research or the research method. If risks or hazards may arise (including discomfort or distress), describe the procedures that will be in place to support the participants, and the method by which the participants would access such support. (For example - contact details of a counselling service or a help line such as Lifeline in Australia. If possible, identify support services that are as specific as possible to the kinds of distress that you anticipate may occur). You should be realistic about potential risks. Almost all research involves some risk, however slight, and the key principle guiding assessment of the ethics of research is that risks need to be offset by benefits. One risk that should be considered is that of third-party identification – that is, that participants might be identified by what they tell you despite your best efforts to hide their identities. The goal is to provide participants with information about the nature and scope of risks, and to show them that you have a plan to manage those risks.
  - **Benefits:** Describe the benefits that you anticipate will accrue from this research. Do **not** be overly general (e.g. “this research will benefit the discipline”) or too personal (e.g. “this research will benefit me”), and *do not overstate* any benefits you think will result. **If you do not expect that benefits will accrue for the participants themselves, include a statement such as “it is unlikely that you will**

**personally benefit from participating in this research, but...” where the “...” can be a statement of broad benefit to the community, society, etc.** While this section can be difficult to write, it is a central principle of ethical research that it must meet the beneficence criterion in that the benefits of the research must outweigh the risks to participants, so it is good practice for researchers to inform participants of the prospective benefits of the research as part of the process of obtaining informed consent. For example, you might say something like “We expect that this research will improve understanding of ... and we hope (or anticipate or expect, depending on the context) this understanding/knowledge will enhance policy development in this area.” Note the above text is just an example, so you will need to write your own!

- **Implications of Participation:** Depending on the research subject and the intended participants, it may be necessary to indicate exactly how the project relates to care being given by medical practitioners or courses of study or employment requirements or other activities. Potential participants need enough information to be confident that declining participation in the research will not have adverse personal effects. **If there are no or negligible implications, leave this section out.**

#### **Exclusion criteria:**

- **Participant Limitation:** If relevant, detail the reasons for which potential participants would be excluded from the project. Omit this section if there are no exclusion criteria.

#### **Confidentiality:**

- **Confidentiality:** Indicate whether anyone but the nominated researchers will have access to the material provided by the participants and how the confidentiality of the participants is to be preserved. Describe the process briefly but in sufficient detail for the participants to understand how their data will be kept confidential during **both** the collection phase and in the publication of results. With regard to publication of results, indicate how participant information will be attributed – e.g. full name, pseudonym or no attribution within published materials. In cases in which it is difficult to protect confidentiality, you should not try to understate these difficulties. It is more ethical to explicitly warn potential participants that you may not be able to guarantee confidentiality, and therefore, they should avoid providing any sensitive information or information about illegal activities (if this is relevant), and should not say anything defamatory.

#### **Notes on confidentiality:**

- Confidentiality and anonymity are not the same. If you know who your participants are – they are not anonymous, but you can still seek to provide confidentiality.
- Please note that you cannot guarantee confidentiality. Phrases like “Confidentiality will be protected as far as the law allows” can be helpful here. Not all projects require confidentiality. For example, professionals interviewed about their professional expertise may be quite happy to have their name associated with the material.
- For a simplified-language version, you might say “I won’t tell anybody who you are or that you told me what you did unless you say it is okay for me to. If you tell me certain things – e.g. that someone might be hurt – I might need to tell someone else, so try not to tell me things like that.”
- Focus groups need particular provisions regarding confidentiality as group members may know each other, and will generally witness each other’s contributions. Thus, when focus groups are used, you should include advice in the Confidentiality section requesting that focus group members

maintain the confidentiality of group discussions, and that individuals in focus groups should refrain from making statements of a confidential nature or that are defamatory of any person.

### Privacy Notice:

If your research involves the collection of personal (including sensitive) information, such as (but not limited to) health information from participants, then you need to include a section on privacy for compliance with the Privacy Act 1988. Under the Act, ANU is required to notify a person of collection of their personal data and advise the identity and contact details of the collecting entity, the purpose of the collection, the way in which data will be collected, treated, accessed and stored, and of the person's rights under the Privacy Act. This information is mostly already covered elsewhere on the Information Sheet, but for compliance with Australian Privacy Principle 5, you need to include the following notice:

In collecting your personal information within this research, the ANU must comply with the Privacy Act 1988. The ANU Privacy Policy is available at [https://policies.anu.edu.au/ppi/document/ANUP\\_010007](https://policies.anu.edu.au/ppi/document/ANUP_010007) and it contains information about how a person can:

- Access or seek correction to their personal information;
- Complain about a breach of an Australian Privacy Principle by ANU, and how ANU will handle the complaint.

**Note:** The language of the Privacy Notice is very formal – basically, it is a compliance requirement. For simplified language versions, you might instead say “Australian privacy law (or rules) require me to tell you how my University handles your private information, and you can ask me to give you more details of that or how you can find out what information we have about you and to fix it if it is wrong.”

### Data Storage:

- **Where:** Indicate where the data will be stored and how the security of personal information will be maintained during collection, analysis and preparation of results. See - ‘ANU [Code of Research Conduct](#)’. If you intend to archive your data, you should provide details about where the material will be archived, for how long and under what access conditions. **Please note that it is normally an expectation that data will be stored at the ANU, and storage outside the University (e.g. on a home computer) needs to be justified. Minimally, storage on any computer should be password-protected and, ideally, encrypted. This is especially important if storage is on laptops or smartphones as these items are desirable items for thieves (and all information should be securely backed up on University computers as well).**
- **How long:** Normally data must be stored for a period of at least five years **from the date of any publication arising from the research** but if you are an Undergraduate/Honours student, you need only to keep your data for a year following the submission of your thesis. Longer periods and different locations may apply if the research is conducted in conjunction with other agencies or is medical research. **Note that the requirement for data storage may extend beyond your time at the ANU – e.g. if you are a PhD student who will graduate before the end of the storage period. In this case, you need to make arrangements for the continued storage of research data at the University – e.g., by your supervisor or Head of School/Department. It is generally not acceptable to ONLY store research data on a home computer following your departure from the University. The requirement for such storage is a feature of the Australian Code for the Responsible Conduct of Research, and so extends beyond ANU policy alone.**

- **Handling of Data following the required storage period:** Provide an explanation of what will happen to the data at the end of the storage period. Explain if the data will be destroyed, archived or used for future research projects. In the latter case, be as specific as possible.

**Notes on Data Storage:**

- o Note that the National Statement on the Ethical Conduct of Human Research does **NOT** require data to be destroyed after the storage period. As acquiring data imposes a burden on participants, it is ethical to seek to allow later use of the data provided that later use does not expose participants to new or additional risks. Thus, after the data is no longer needed for the current research, it may be archived or retained *in a de-identified format* either by you, the original researcher, or by other researchers if you have indicated to participants that data may be later shared. The key here is to maximise the utility of data gathered, a purpose not served by routine data destruction. Of course, if data is sensitive or contains privileged or confidential information then destroying the data may be reasonable. However, researchers should consider whether suitably de-identified data would be of further use, and should facilitate whenever feasible to do so. Physical records (such as interview recordings or transcripts) may be destroyed as storing them for future use may be infeasible, but the same is not generally the case for electronic records.

**Queries and Concerns:**

- **Contact Details for More Information:** Any requests for information or queries regarding the study participants should be directed to [abhaas.goyal@anu.edu.au](mailto:abhaas.goyal@anu.edu.au) (+61 470 696 380) or my primary supervisor Dr. Alex Potanin ([alex.potanin@anu.edu.au](mailto:alex.potanin@anu.edu.au)).

**Ethics Committee Clearance:**

The ethical aspects of this research have been approved by the ANU Human Research Ethics Committee (Protocol 20xx/xxx). If you have any concerns or complaints about how this research has been conducted, please contact:

Ethics Manager  
The ANU Human Research Ethics Committee  
The Australian National University  
Telephone: +61 2 6125 3427  
Email: [Human.Ethics.Officer@anu.edu.au](mailto:Human.Ethics.Officer@anu.edu.au)