Computing Final Year Undergraduate

COM616 PROJECT HANDBOOK 2022-23

Computing – Faculty of Business, Law and Digital

"Knowledge is of two kinds.
We ***know a subject*** *ourselves,*
or we know where we can
find information about it.

When we ***enquire*** *into any subject,*
the first thing we have to do is
to know what books *have a treatment of it.*
This leads us to look at ***catalogues****,*
and the backs of books in ***libraries****."*

Samuel Johnson 1709-1784

About this Handbook

This handbook is designed to give guidance for Dissertation Project COM616. As there is a diverse range of courses within the Computing Subject Group, support offered within this handbook will be generalised and so we recommend you discuss your potential approaches and report structure with your Project Supervisor. It is importance that you refer to learning resources on COM616 SOL as there will be more dynamic content offered.

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1. Introduction

All undergraduate and graduate students complete their studies by undertaking a large self-directed independent assessment, referred to as a Dissertation or Final Project. Traditionally completing a Final Dissertation Project would be the first chance an undergraduate student would have in publishing an academic paper. Through completing a Final Project, an undergraduate will transition from a student to a professional practitioner.

As part of Level 6 of your bachelor's degree you are required to undertake a Final Major Project. The content of the project should reflect your interests within your field of study, drawn from relevant theory and be supported by the practical aspects of your degree.

The completed project must demonstrate your ability to plan, execute, evaluate and present the findings of a suitable applied research topic. The final output will consist of a 10,000-word report, involve 400 hours of project time and the production of an artefact.

1.2 Overview

The Computing Subject Group at Solent University require that students' projects should reflect the aims and learning outcomes which characterise the programme to which they contribute as set out in the programme specification.

Projects must involve the production of a report which should include:

- explanation of the problem and the objectives of the project
- an in-depth investigation of the context and literature, and where appropriate, other similar products
- where appropriate, a clear description of the stages of the life cycle undertaken
- where appropriate, a description of how verification and validation were applied at these stages
- where appropriate, a description of the use of tools to support the development process
- a critical appraisal of the project, indicating the rationale for any design/implementation decisions, lessons learnt during the course of the project, and evaluation (with hindsight) of the project outcome and the process of its production (including a review of the plan and any deviations from it)
- a description of any research hypothesis
- references

Undergraduate individual project requirements:

- ability to apply practical and analytical skills
- innovation and/or creativity
- synthesis of information, ideas and practices to provide a quality solution together with an evaluation of that solution
- project meets a real need in a wider context
- the ability to self-manage a significant piece of work
- critical self-evaluation of the process

There are **two distinct areas within the project**

1. the "**product**" – (or artefact) is what you create together with associated documentation, results of an investigation and primary research.

2. the "**process**" used to research, plan and monitor the creation of the "product", including the selection of appropriate methods, tools and techniques.

1.3 Learning Outcomes

On completion of this module you will be able to undertake a self-managed project from the selection of appropriate topic to undertaking research to inform your design and implementation of an artefact, which will have been evaluated using appropriate methods. The ability to do so, will require you to meet several learning outcomes:

1. Undertake a significant self-managed project in a planned and systematic fashion.
2. Identify, interpret, deconstruct, compare and integrate theory drawn from a range of appropriate sources.
3. Select, apply, evaluate, make judgements on the appropriateness of methods, tools and technologies.
4. Communicate clearly and concisely verbally, visually and in writing.
5. Apply current professional, ethical and legal guidelines.
6. Reflect critically and constructively on work in progress and final outputs, devising strategies for improvement

1.4 Expectations

The Project is a 400-hour self-managed assessment which means students are responsible for the selection of a topic, driving their project and their own learning forward.

It is envisioned that you will bring together all the skills you have acquired in previous levels and build on these working on your project.

Skills Needed:
Researching, project management, time management, academic writing, critical thinking, problem solving, collecting and analysing data and ability to create your artefact.

It is important from the onset that you strengthen your academic skills in sourcing and surveying literature, structuring reports, academic writing, citation and referencing.

2. Module Structure

The module is divided into **FOUR** main phases with a submission at the end of each phase:

	Phase	Semester	
1	Initiation	1	Project Outline
2	Feasibility	2	Progress Report
3	Implementation & evaluation	2	Project Report
4	Presentation	2	Poster/Viva

2.1 Project Milestones

This table further breaks down the milestones and events contained within each of the four main phases of the project:

Project COM616 Milestones			
	Assessment or Event	**Week**	**Deadline/Date**
Semester 1	1st Project Presentation Lecture LIVE ONLINE	**1**	27/9/2023
	Project Outline Submission (Formative)	**6**	**16:00 hrs 5/11/2022**
	2nd Project Presentation Lecture LIVE ONLINE	**8**	8/11/2021
	Supervisor selection followed by Supervisors meeting up with their students to agree and sign off Project	**9-12**	22/11/2022 - 16/12/2022
	3rd Project Presentation Lecture - **ON CAMPUS with Solent Futures**	**9**	22/11/2022
	4th Project Presentation Lecture LIVE ONLINE	**12**	13/12/2022
Semester 2	5th Project Presentation Lecture LIVE ONLINE	**1**	24/1/2023
	AE1 Progress Report (20%)	**5**	**16:00 hrs. 24/02/2023**
	6th Project Presentation Lecture LIVE ONLINE	**6**	28/02/2023
	7th Project Presentation Lecture LIVE ONLINE	**8**	14/3/2023
	8th Project Presentation Lecture LIVE ONLINE	**10**	28/3/2023
	9th Project Presentation Lecture LIVE ONLINE	**12**	**18/4/2023**
	AE2 Final Report (70%)	**13**	**16:00 hrs 5/5/2023**
	AE3 Presentation (10%)	**14**	**16:00 hrs 12/05/2023**
	Degree Show Celebration Event (TBC)	**15**	Week of 15/5/2023

Project Selection

image: Ian Mationg

Step 1

3. Project Selection

The project process commences with the selection of a topic area as early as possible. Students will be encouraged to develop their own project topic, but there are likely to be several projects proposed by project tutors. Where applicable details will be published on COM616 SOL.

The project module represents one-third of the work you will complete in the final year of your degree course. It is, therefore, important that you choose a project topic that interests you. It is also worth considering the relevance of your project topic to what you want to do after you finish your course.

The starting point of your project is defining the ways you are using technology and innovation to address **research question/problem** or hypothesis**.**

Projects must be completed on an individual basis and must involve the production of an artefact. They therefore divide into the following categories:

- those that involve the design and **build** of a product
- those that involve **experimental** design based on techniques such as simulation systems
- those that involve **modelling** testing to prove a theory or concept is viable and scalable.

While formulating a research question the following process is tenable:

- pose a question
- Begin with how, what or why
- Specify the independent, dependent and control variables or specify a phenomenon
- Use such words as describe, compare, relate or indicate the action or connection among the variables.
- Indicate the sample and population

Three popular forms are available to frame the question statement i.e.

1. Question form,
2. Relationship form and
3. Comparison form.

SUGGESTIONS FOR FORMULATING RESEARCH QUESTIONS
Adequate formulation of research question statement is one of the most important parts of research. However, there are some suggestions, which if followed, result in good research question statements being framed.

- Research questions must explain the relationship among variables.
- Research questions should not be vague e.g. what the issue of illiteracy is.
- Specific problem to be solved must be indicated e.g. what is the effect of intelligence on achievement?
- Research questions should be researchable and feasible. these must be within the reach of a researcher and must contribute to the quantum of knowledge.
- It must specify the activities of the researcher. A good research question monitors the researcher's efforts.
- It must not involve any philosophical issue or value judgement.
- It should be observed that the problem's solution fills the gap in the existing knowledge or helps resolve some of the inconsistencies or the interpretation of known facts.
- The scope of the investigation or the limits within which the problem is to be studied must be mentioned explicitly in stating a research problem.

(BASU 2015)

To make a start on the process of choosing a topic for the project, the following questions may be of help:

What aspects of my course would I like to pursue further in a practical way?

- Will my project satisfy the module outcomes?
- Can I choose a project that will help me to get my first/next job?
- What industry-related problems do I consider as being important for investigation?
- What practical outcome would I like to see achieved as the result of a study and investigation?

You will need to have chosen your Project Topic ready for the **Project Outline** submission **(see milestones list).** This will be supported by a list of sources by documentation of initial enquiry in you logbook/project library and list of useful sources which have been identified, selected and screened using a method. See the SOL assessment tab for more details.

Following this you will be allocated a Supervising Tutor and you will start to read around your topic area, assessing/building your skills, organising collected sources and documentation of pilot experimentation.

More details on getting started can be found at Succeed@Solent *Dissertations and Major Projects: Get Started* (SOLENT UNIVERSITY 2020)

3.1 Organising your Project

Final year project **consists of a number of key activities**:

- selection of appropriate sources of supporting literature
- identification and requirements/specification of what needs to be achieved
- selection of suitable tools and methods with which to conduct the work
- conduct of the project work
- review and reporting on the process.

Project management is about planning these activities over time (400 hours) and ensuring that appropriate action is taken as soon as possible to resolve any identified potential risks to successful completion of the project.

Project monitoring and control are concerned with recording the progress of the project and using a pre-determined method to ensure that project milestones are completed on time.

4. Ethics Policy

Image: CC BY-SA 3.0 Nick Youngson

All projects must be carried out within the framework of the University's Ethics Policy, see the portal for full details. **An ethics release form should be completed as soon as your project has been approved.** This is done on-line via the Portal Apps and will involve answering five questions. If using participants in your project they need to complete an Informed Consent Form **(Appendix B)**.

Initiation

Step 2

5. The Project Initiation Phase

The Project module does not formally start until the beginning of **Semester 2**. However, given the limited amount of time available for you to complete your project it is essential that you have a clear idea of what you are aiming to achieve right from the start of the module.

You need to produce a **Project Outline** for your project supported by a list of appropriate literature sources and initial exploratory work recorded in a logbook/project library, and submit this in **Semester 1** (formative assessment) - using the form supplied **(Appendix C)**, you will then be allocated a supervising tutor. Following on from this you will meet with your supervisor and then, following project sign-off, start to gather literature to support your project and investigate the best way to undertake project management.

5.1 Support Lectures

Throughout the life cycle of the Project there will be **Support Presentations**, which will prepare you for each of the phases/milestones. These will be delivered as a lecture to **ALL** Level 6 students undertaking module. Check your timetables for more details.

There will be an accompanying lecture capture video. These will be available through the Solent Online Learning (SOL). There will also be a number of short update videos

5.2 Managing Your Project

Level 6 (3rd year) is a very busy year and will go very quickly - You will also have to manage your Final Project, as well as 4 other modules. So, make sure you familiar with all your deadlines, so you can manage study, work and other commitments.

5.3 Reading round your topic area

Finding things out or reading around your topic area, and field of study, is one of the most important aspects of the Project. You will need to select appropriate sources, these are academic papers, journals, books and software documentation etc. **Reading academic papers will give you a better understanding how you can best present your own written work.**

You will need to discover current practice for the management of your project, methodologies/methods, testing, evaluation, and analysis of results. You will also need to evaluate your practical skills and undertake learning to fill any gaps. This work will take place in both the initiation and feasibility stages of your project up until the submission of the **Progress Report** in **Semester Two** in **February (see milestones list)**.

Find out more about **Reading around your topic area** on SOL

5.4 Logbook & Project Library

An important aspect of this phase of your project is organising all useful sources within a Logbook & Project Library, these can either be physical notebooks or ideally digital. There are tools which can be used for collecting documents and diagrams: Microsoft OneNote, Evernote, Slack, Notion, GitHub and cloud storage such as MicrosoftOne Drive and Google Drive. For more details on Logbook and Project library **(Appendix D)**.

There are a number of tools to help you create reference, bibliography lists and add Citations in MS Word and Google Docs such should as ProQuest RefWorks, Zotero, mybib.com/, mendeley.com or similar plus Google Scholar for finding and collecting referenced sources.

5.5 Report Writing

In the Project Initiation Phase, it is important to strengthen your academic writing skills in preparation for the first assessment in **Semester two.** Guidance in this area will be offered in the **Support Lectures.**

The thought of writing a 10,000-word report can seem daunting, but if you have managed your time well, completed the artefact, tested it and gained validation/feedback and have organised/documented all your findings – the write-up should be straight forward.

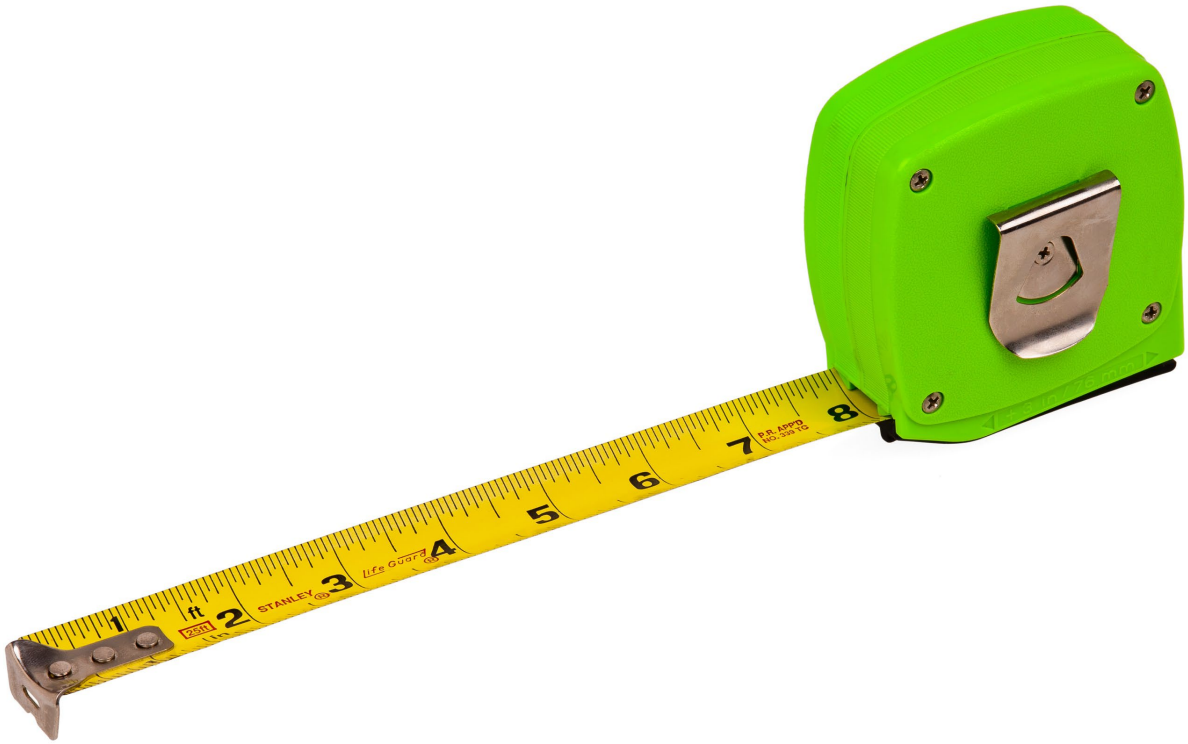
Before you start writing up a report you need to outline all the sections/subsections allocating a rough word count for each and noting the needed includes for each. All the information you need for the write-up should be contained within the documentation in your Logbook/Project Library.

Skills Needed:

- **Harvard referencing**
- Ability to write in an academic tone (3rd Person)
- Clear and concise **writing style**
- Ability to layout your **Report to the required format**
- Discuss **literature sources**
- Understanding of **plagiarism/academic misconduct**

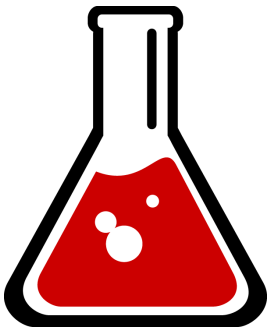
Find out more about **Academic Report Writing** on SOL

Feasibility



Step 3

6. Feasibility Phase



At this stage you should already have collected supporting information for your project. You will now need to test this to attain the viability of your project, including your assessment your skills, valuation methods and making changes if appropriate.

This phase will wrap-up with a written assessment; the 2000-word **Progress Report AE1** submission deadline in **Semester 2**. See (Appendix E) for the brief.

6.1 Project Supervision

Once the **Project Outline** has been accepted in **Semester 1**, it is then your responsibility to carry out the project within the agreed time (400 hours) to completion by the end of **Semester 2**.

After initial discussion with your supervisor in **Semester 1**, you will start exploring the feasibility of your project working towards the first summative assessment the **Progress Report AE1.** Remember it is important that you organise the information you collect by documenting it within a Logbook and storing it in a project Library.

When you first meet your supervisor in Semester 1, you should have a list of quality sources which will be annotated for their usefulness to your project. You will present documentation in your logbook/project library of your initial exploration of your project topic.
You are expected to be able to clearly explain your project aim, background/context and what you intend to do next to move your project forward.

Your supervisor will expect to see you following the submission of the Project Outline in Semester 1, and then weekly, or more frequently as conditions demand throughout Semester 2. The onus is on you as the student to present evidence of their project progress using the logbook and project library at each supervision meeting.

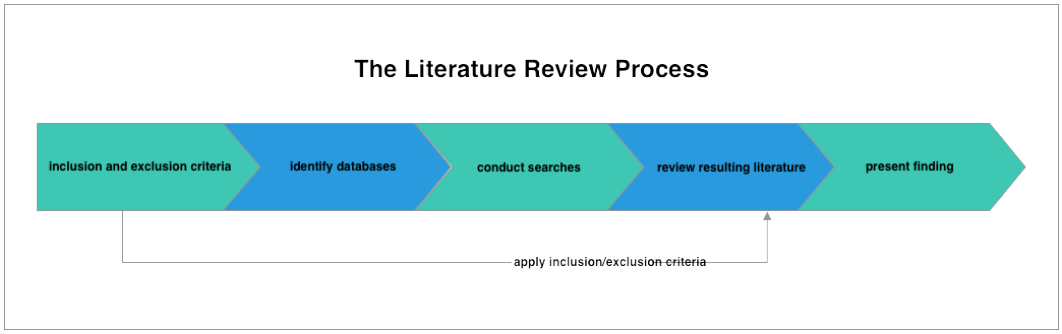
Make sure you keep your supervisor updated with your progress through the project life cycle, if you cannot make a meeting you must let you supervisor know and email your updates instead. See **Project Supervision** on SOL

6.2 Selecting/Surveying Sources & Literature Review

How to conduct a literature review

A literature review is the process of searching and critically appraising and interpreting the literature that relates to your research topic. Although there are many different types of reviews, within Graduate Professional Development and for your final year project we are going to be following a systematic approach.

A systematic literature review is one that follows a series of repeatable steps known as a 'protocol'. In this context a protocol is useful as it allows us to provide you with a recipe detailing how to conduct a literature review.



There are a number of different approaches to creating a literature survey see **(Appendix A)** for the systematic literature review process

6.3 Introduction & background, research question, problem statement or hypothesis

Introductions, like conclusions, are the most challenging sections to write in a report or essay.

An introduction is an expansion of your project title offering more detail about the problem or question you are tackling in the report or paper. It will present a clear statement of your purpose – Why did you carry out the research? Why are you writing this report?

It will also Indicate the scope of your research and define any key terms which aid understanding in the introduction.

You need to set your work in the context of previous work with your field of study or problem to solve and identify any gaps in current practice and/or literature, explaining how you intend to address them.

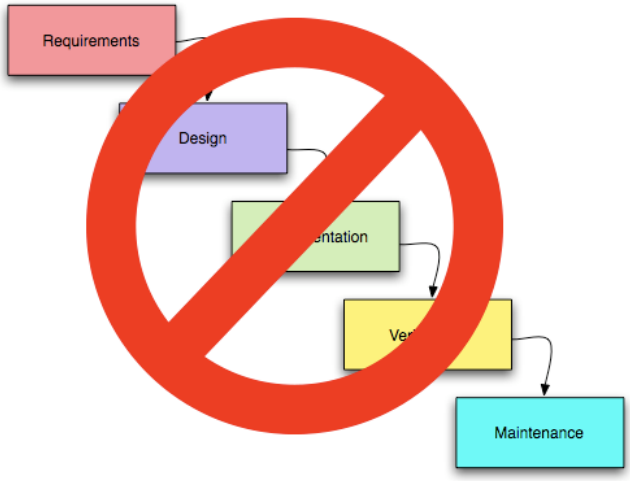
More details on Introductions on Succeed@Solent

6.4 Specification/Requirements (software product/build project)

Your specification/requirements will vary depending on the type of your project but will outline and justify key decisions taken in relation to both functional and non-functional aspects of the artefacts developed, or the criteria being investigated, platform support, and performance requirements.

6.5 Methodology

A common mistake that students make in their method section it is to confuse design/project production processes such as Waterfall, Agile etc. with academic/computer science/scientific methods.



DO NOT USE OR DISCUSS PROCESSES METHODS SUCH AS WATERFALL AND AGILE IN YOUR METHODOLOGIES/METHODS SECTION, but where appropriate to project type these would be better place/discussed/used within the project management section and/or referred to within the design/implementation/matters arising from implementation sections.

The methodology/method section in an academic report should focus how the project will be approached, tested and evaluated. This could be done through software/hardware testing/validation, surveys, questionnaires, case study, observation, modelling, experiment, interviews, user testing etc. Projects vary so not all of these will be appropriate. You will also discuss how the results from evaluation (data collected) will be used and analysed.

Your methodology/method section is not project management - it is how you intend to evaluate and test your proposed problem/research question theory/hypothesis. It is important you search for papers & journals and analysis the methodology/method sections to decide the most appropriate method/process for a project.

Overview of scientific methods/methodologies can be found here:

How to develop a Hypothesis

Comparing the Engineering Design Process and the Scientific Method

Introduction to the Scientific Process

1. Define a question
2. Gather information and resources (observe)
3. Form an explanatory hypothesis
4. Test the hypothesis by performing an experiment and collecting data
5. Analyse the data
6. Interpret the data and draw conclusions that serve as a starting point for new hypothesis
7. Publish results
8. Retest (frequently done by other scientists)

The iterative cycle inherent in this step-by-step method goes from point 3 to 6 back to 3 again

(CRAWFORD & STUCKI 1990)

Empirical Research Method (ERM)
Empirical research is based on observed, experiment and measured phenomena. It gains knowledge from actual experience rather than from theory or belief.

Qualitative vs Quantitative (Data or research)

Qualitative Data is opinions, interviews, perspectives and observations (Subjective)
Quantitative Data is numbers/data/statistics (Objective).

The Frascati Manual classifies research into three categories:

1. **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge about observable phenomena and facts, not directed toward any particular use.

2. **Applied research** is original investigation to acquire new knowledge directed primarily towards a specific practical aim or objective.

3. **Experimental development** is systematic effort, based on existing knowledge from research or practical experience, directed toward creating novel or improved materials, products, devices, processes, systems, or services.

"The internationally recognised methodology for collecting and using R&D statistics, the Frascati Manual is an essential tool for statisticians worldwide. It includes definitions of basic concepts, data collection guidelines, and classifications for compiling statistics. This updated edition contains improved guidelines adjusted for changes in OECD economies, including measurement of service-sector R&D, R&D globalisation, and R&D human resources."

(FRASCATI MANUAL 2002)

Methods Section

"The methods section in academic writing describes actions that are taken to investigate a problem and the rationale for the application of specific techniques used to identify, select, process, and analyse information applied to understanding the problem, which allows your reader to critically evaluate a study's overall validity and reliability. It should be direct and precise."

The methods section answers two main questions:

How was the data collected or generated?
How was it analysed? "

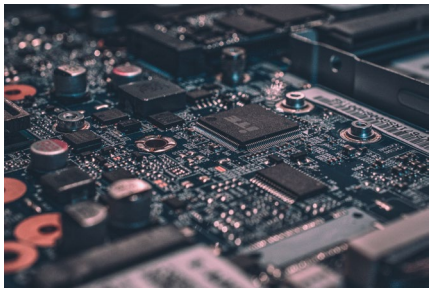
(Kallet 2004)

Guidance on creating your Method section will be presented in the Project Support Lectures, you will also receive advice from your supervisor, but more importantly you need to discover what is current practice, by reading method sections in academic papers

Succeed at Solent SOL Offers guidance on methods:

Dissertation proposals & writing dissertations

Traditional Computer Sciences Research Methodologies



Computer Sciences Research Methodologies traditionally fall into **FIVE** categories. As an undergraduate or based upon the type project chosen, some of these are not applicable to your project, but it is important that you understand what methodologies are:

Formal
Formal methodologies are used to prove facts about algorithms and system. So mathematical methods to prove the correctness of a system based on the specification/requirements. They are use on large complex systems and smaller and less complicated systems

Experimental
Experimental methodologies to evaluate a new solution to a problem. The first step is to explore and identify what questions need to be asked about the system. The second and final step would be to attempt to evaluate the system based upon these questions

Build
Build methodologies involves building an artefact (product) to prove what is possible (proof of concept). I research this should be creating something new or offers new features that have previously not been a demonstrated before.

Process
Process methodologies are common in Software Engineering and are used to understand the processes used to accomplish tasks when building and using computer systems.

Model
This methodology involves creating a less complicated system that model (abstract model) to emulate a more complicated (real world) one. Experiments undertaken on the model are referred to as simulations.

(NELSON AMARAL, J. *et al.*, n.d)

Guidance on Methods will be given in the **Support Lectures,** from your supervisor, but more importantly you need to discover what is current practice, by reading method sections in academic papers. Succeed at Solent SOL offers guidance on methods and on **COM616 SOL.**

6.6 Professional, legal and ethical issues

Professional Practice

Part of the Project is matching your approach to current industry practice, including, where appropriate within your field of work: ethical work practices, software/development specification and requirements, accessibility/usability and application design guidelines.

What is important to note is that there is not one standard guideline, so approaches vary. So, it's important to select what is appropriate for your project in line with current best practice. Go out there and speak to software engineers, developers, designers and network engineers to find out what they would recommend for creating requirements/specifications.

You also need to consider any potential **professional, legal and ethical issues** that may apply. For some projects, it may be that there are no relevant issues in one or more of these categories. The kind of issues that may apply here include; copyright and data protection issues, compliance with relevant industry standards and codes of practice (including appropriate behaviour when dealing with external clients), accessibility, protection of vulnerable persons who may be included in the intended user group for your project artefacts, etc.

NEW General Data Protection Regulation (GDPR)

The new data protection act comes into force in May 2018 and is an update to current data protection more which has been expanded to cover changes in how data is handled and who has responsibility for data breaches. Although you will complete your project before this more come in, it is important, as a professional in the tech industry to be aware of its reach and implications.

More details are available here:

BURGESS, M., 2017. *What is GDPR? WIRED explains what you need to know* [viewed 12 September 2018]. Available from: http://www.wired.co.uk/article/what-is-gdpr-uk-eu-legislation-compliance-summary-fines-2018

INFORMATION COMMISSIONER'S OFFICE., 2018. *Guide to the General Data Protection Regulation (GDPR).* [viewed on 12 September 2018]. Available from: https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/

Intellectual Property Rights (IPR)

You need to be familiar with the university's Intellectual Property Rights policy, outlined below, especially if you are considering conducting a project that aims to produce an outcome for an employer/other third party or are thinking of developing a product that you may later wish to develop commercially:

8. Students *are not employees and thus own the IP in materials that they create unless there is a written agreement to the contrary. Students enrolled with the University will be required to assign their IP to the University before they become involved in any activity in which the University may require use or control of the IP for teaching, research or commercialisation.*

39. The University acknowledges that Students, as non-employees, own the IP they create independently in the course of their degree studies, subject to a number of exceptions as detailed in sections 40 to 43.

For more detail see the full policy here:
Solent University's Intellectual Property Rights Policy updated 2017

For detail of Photographic copyright including public domain and Creative Commons, find guidance here

6.7 Project Progress

You will need to present the progress you have made so far which should prove the viability of your project, making changes and adjustments were necessary.

What and how you present will depend on your project type and its associated process, but you could present results from any **initial surveys, audits, client appraisals, experimentation, modelling** etc. It will also be good to see **discussion of any guidelines**, and **evaluation of tools, frameworks platforms and software**. To prove your evaluation, you will need to show documentation of any initial experiments you have undertaken.

6.8 Experimentation

Experimentation will explore the practicalities of applying the tools, design methods and techniques discussed in your **Project Progress Evaluation of Techniques** within the **Project Progress Section** of the **Progress Report**.

Undertaking these tasks will establish that your chosen design and technical processes are the right fit for your project.

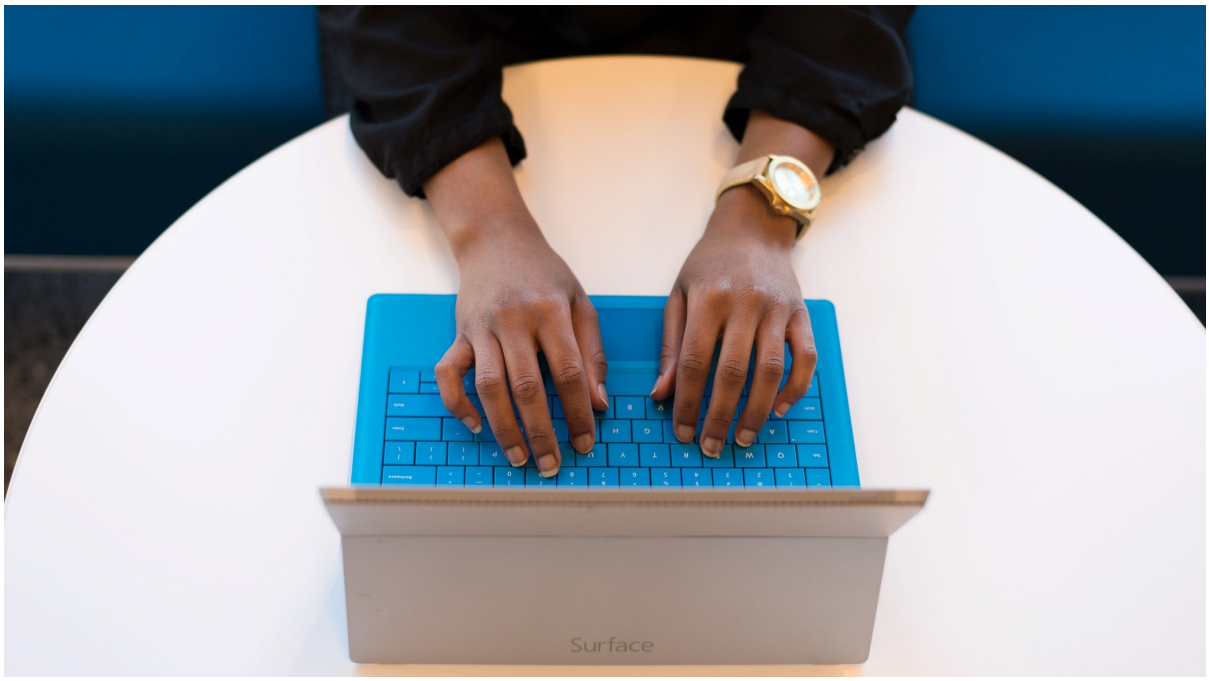
There are a number of tools and processes available for prototyping and experimentation. You are free to explore other options, **as this is what the project is about!**

If using code of scripting it is good to implement professional work practices such as using version control to present your work through GitHub.com.

6.9 Design and Implementation Planning

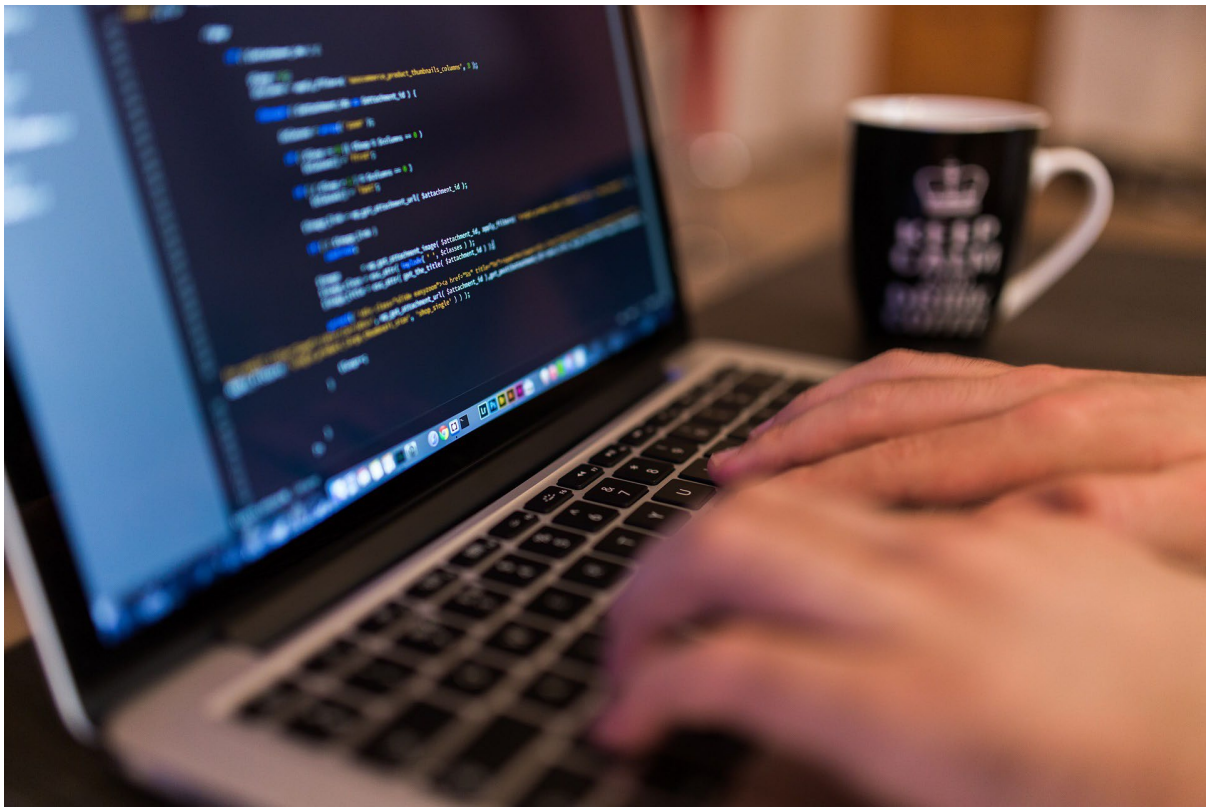
You will need to derive a coherent plan for the final design and implementation of your project. This will involve building on your Project Progress conclusions from the Progree Report (AE1), this section will set out the design and implementation strategy/process for the next phase of the project. These will include the design and technical aspects of creating your artefact, validation and testing strategies.

Implementation



Step 4

7. Design and Implementation



This part of the Project will document the implementation, testing or the conduct of the investigation of your project. There will also be discussion on any issues/problems that arose and how each was resolved. This section will provide evidence of your problem-solving abilities and should clearly indicate that you are willing to look to external sources for information and develop your personal skill-set to resolve problems

The Design and Implementation planning you discussed within the **Progress Report (AE1)**, will now be applied to your project which will include designing, creating your artefact, testing and validation, all of which will be documented in your Logbook and Project Library.

Make sure you allocate enough time to complete this major part of your project and still leave time to comfortably write up the **Final Report (AE2).**

More details COM616 SOL.

Reporting

Step 5

8. Final Report Write-up

You will start the Final Project write up once the implementation phase is complete, and your project has the required outcomes.

You will already have documentation in your Logbook/Project Library, plus the work undertook within the progress report, and it is this information you will draw from to write up your Final Report. If this information is complete and well organised, it will make the write-up a straight forward process. An overview of academic reporting can be found here in this Handbook.

You should have allocated an enough time to write your report within your project planning.

Create a project outline for each of your sections and subsections then roughly allocate how many words you intend to write in each of these, also specify what references/citations, diagrams and tables you intend to include.

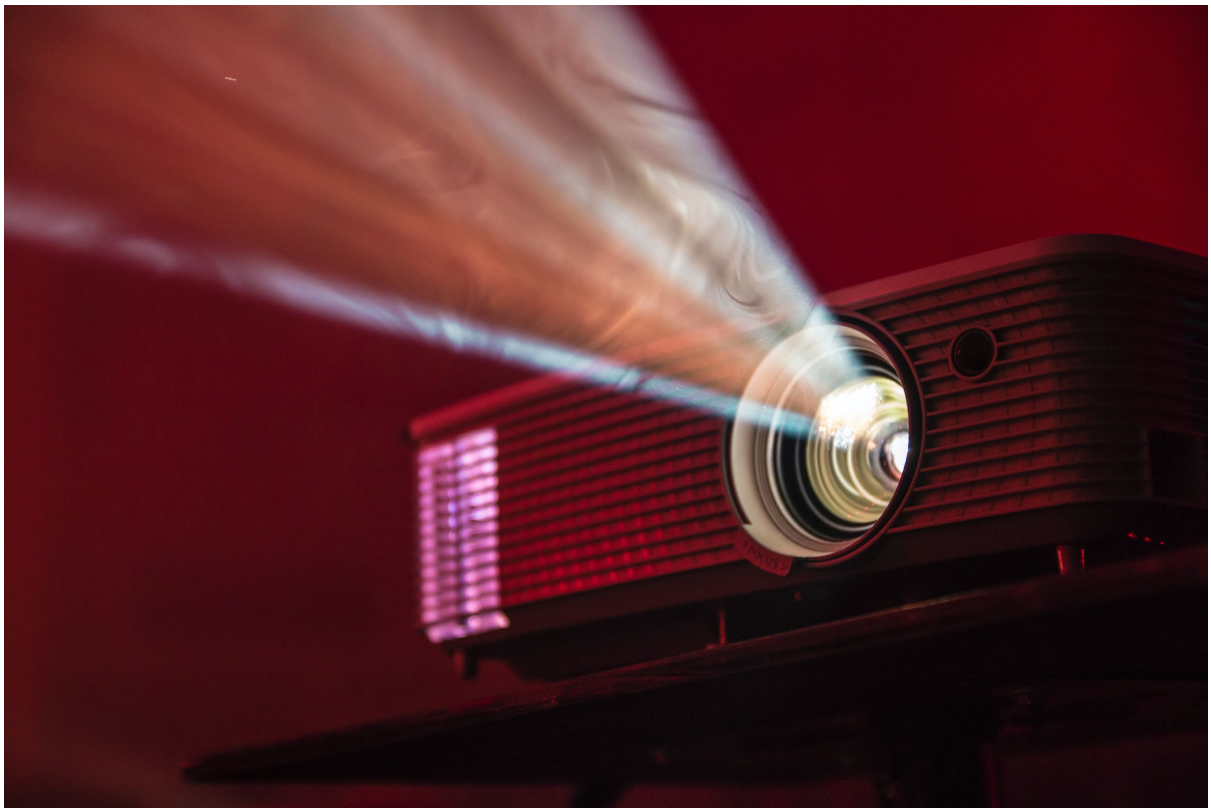
REMEMBER the assessment gives a suggested structure which covers the main headings, you will need to break these down into sub-sections to give your report clarity.

When you are writing each section of your report it is important you think about what you want to get across before starting. You will also need to connect ideas/theme from each of your paragraphs or sections this is called signposting.

Make sure you have time to redraft what you have written - it may well be the case you do this several times.

More details on academic writing, referencing and dissertations can be found on Succeed@Solent. See **(Appendix F)** for the brief for Project Report AE2.

Project Presentation



Step 6

9. Presentation Phase

This assessment is concerned with your ability to communicate information about your project. You are required to:

- prepare and display presentation materials that allow someone who has no prior knowledge of your project to quickly grasp a basic understanding of what has been achieved in your project
- respond to questions about any aspect of your project

15 minutes (approx.) - **10min** Presentation & **5** Demo (Video) plus **follow up** Q&A which will be live online (Teams)

This assessment will bring together all your work and evaluation at the Computing degree show. This event will involve the production of an academic AE1 style poster, which communicates your project lifecycle and there will be an opportunity to get real-word feedback from industry visitors.

You will create a video presentation of you present your project life cycle with the support of your poster: (10 mins approx.) plus a demonstration of what you have produced (5 mins approx.) and your supervisor (first grader) will follow up with a question and answers session which will take place online.

The poster and demo will then be displayed at the Computing degree show week of 15/5/2022 (2 hrs event) details to follow

This assessment will be assessed by your supervisor (first grader) and then sample moderated internally and externally.

9.1 Requirements for Degree Show

The degree show will take place in the Spark Building in the week of 15/5/2023 in a 2-hour event. You are required to prepare an A1 poster (59.4cm x 84.1cm) that will be designed in an academic poster style and equipment for demonstrating your product, you will have already made your poster and submitted a video of you presenting it for AE3.

In addition, you will be expected to provide evidence of the artefacts you have produced. If necessary, you should arrange to bring a suitable laptop to the venue. If it is not possible for you to demonstrate the artefacts developed, (e.g. because your software is part of a client's larger system that cannot be accessed from the university's PCs) then you will need to provide some other means of reviewing your artefacts. The best way in which this can be achieved will depend on the circumstances and you should discuss this with your project tutor.

See (Appendix G) for the brief for Project Report AE3 (10%).

References

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Appendices

Appendix A – Sourcing literature

Prior to conduction your literature review

As computing students, we think in an applied way, we want to make things, get our hands dirty and get stuck into designing or developing a prototype. This can lead to us focusing on tools, techniques, and implementation details too early in the process. For instance, let's assume that you wanted to make a chat bot to help students learn in higher education. At this early stage you want to try and avoid focusing on the tools and techniques to make a chat bot. Instead, you should clearly define a problem statement along with a research question or hypothesis.

Problem Statement: Students struggle when learning complex topics in higher education

Research Question: In what ways can a chat bot assist learning in higher education?

Tip, at this stage you should ensure there is plenty of literature surrounding your research topic. A simple search of Google Scholar can be used

Doing the above sets the focus for your research and lays a clear forward-facing path. If you are struggling in framing your idea in an academic style you should speak to your tutor

The review protocols

Below I shall summarise the review protocol that you should use for your final year project and for Graduate Professional Development (assessment 2). To aid further explanation, I will continue building on the above illustrative idea of creating a chat bot to assist learning in higher education.

Develop inclusion and exclusion criteria

Inclusion and exclusion criteria help you identify what you need to search for when conducting your literature review. Below is an example of what the given criteria may look like for our chat bot application:

Inclusion criteria

Primary sources relating to chat bots used for education or learning purposes
English language only
Published in peer reviewed journals Study took place in the last 10 years

Exclusion criteria

Sources that are related to chat bots not used in an educational or learning setting
Non-English language
Non-peer reviewed sources

Study took place over 10 years ago

It is important to refer to and review your inclusion and exclusion criteria while you are searching. You may need to adjust your criteria if your research focus begins to evolve as a result of performing your literature review.

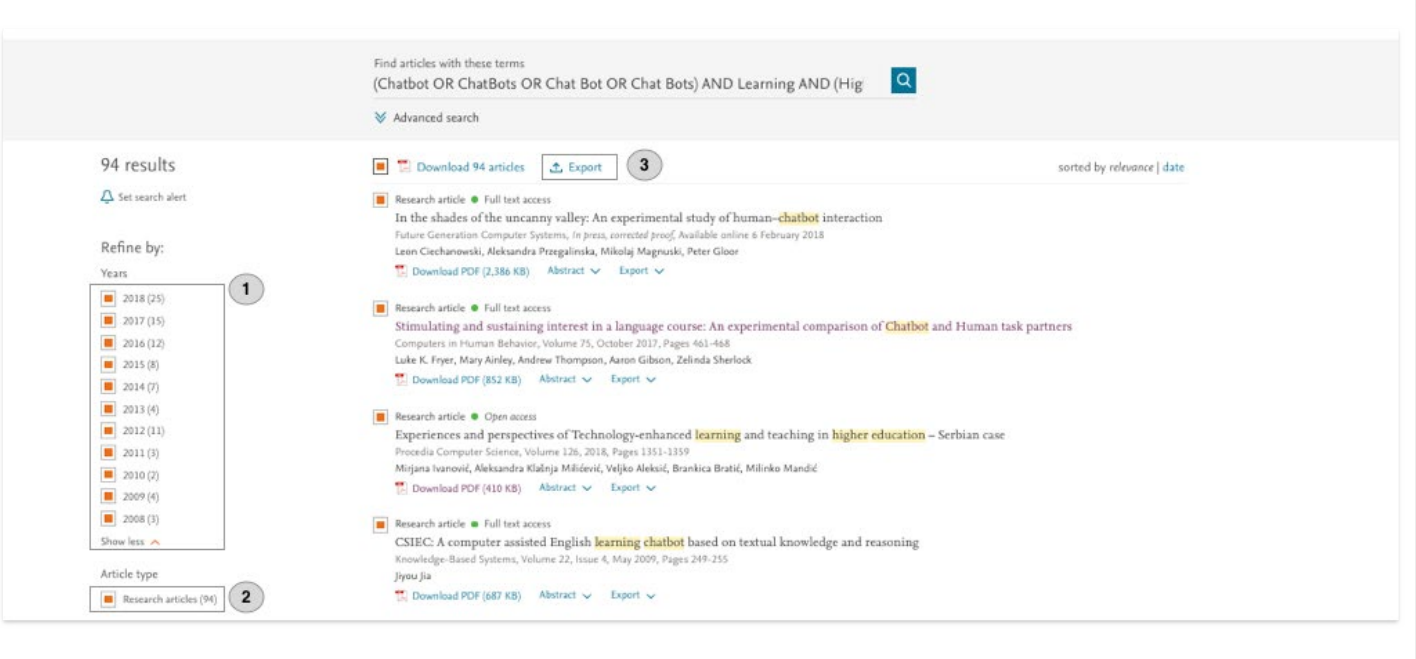
Identify databases
Once you know what type of literature you need to address your research idea and have developed your inclusion and exclusion criteria, you are ready to begin searching for literature. I recommend using online academic databases to conduct your search.

While the library has subscriptions to a range of databases, I recommend using ScienceDirect.

Identify keywords
You should identify the keywords that capture the essence of your research topic. The rationale behind this is that journal articles are indexed on databases using keywords.

The keywords for are chat bot study could be as follows:
ChatBot, ChatBots, Chat Bot, ChatBot, Higher Education, University, Learning, Adult Education, Adults

Conduct searches (Figure 1)



We are now ready to conduct our searches. When conducting your search you should make use of Boolean operators - AND/OR/NOT. These commands use the principles of boolean logic, a concept that as a computing student you should be familiar with.

Using the above principles this is what our chat bot study search string might look like:

> (Chatbot OR ChatBots OR Chat Bot OR Chat Bots) AND Learning AND (Higher Education OR Adult Education OR Adults)

After conducting our search, we can now start applying our inclusion criteria. In Figure 1you can see that we have filtered by date (Figure 2, annotation 1) and just to include research articles (Figure 1, annotation 2). After applying our criteria, you can see that we have 94 remaining articles. This is a very good seed for our literature review. We now need to get the literature into a format that lends itself to more in-depth analysis.

Exporting the search results to excel

Unfortunately, ScienceDirect does not allow us to export to Excel. As such, firstly we slect all our sources and click export (Figure 1, annotation 3) and 'Save to Refworks'. Next, from within RefWorks select your articles and click:

```
'share -> export references -> Tab Delimited  (.tsv)
```

The resulting csv file can now be opened in Excel and can be easily evaluated in one place.

Review resulting literature (Figure 2)

	A	B	C	D
1	Title	Abstract	Links	Key Points
2	Should AI-Based, conversational digital assistants employ social- or task-oriented interaction style? A task-competency and reciprocity perspective for older adults	This study investigates whether social- versus task-oriented interaction of virtual shopping assistants differentially benefits low versus high Internet competency older consumers with respect to social (perceived interactivity, trust), cognitive (perceived information load), functional (self-efficacy, perceived ease of use, perceived usefulness), and behavioral intent (website patronage intent) outcomes in an online shopping task. A total of 121 older adults (61,Äì89 years) participated in a laboratory experiment with a 2 (digital assistant interaction style: (social-vs. task-oriented),ÃØvó,ÃØ2 (user Internet competency: low vs. high),ÃØvó,ÃØ2 (user exchange modality: text vs. voice) between-subjects design. The results revealed that users' Internet competency and the digital assistant's conversational style had significant interaction effects on social, functional, and behavioral intent outcomes. Social-oriented digital assistants lead to superior social outcomes (enhanced perceptions of two-way interactivity and trust in the integrity of the site) for older users with high Internet competency, who need less task-related assistance. On the other hand, low-competency older users showed significantly superior cognitive (lower perceived information load) and functional outcomes (greater perceived ease and self-efficacy of using the site) when the digital assistant employed a task-oriented interaction style. Theoretical and agent design implications are discussed. "	http://www.sciencedirect.com/science/article/pii/S0747563218304230	
3	Stimulating and sustaining interest in a language course: An experimental comparison of Chatbot and Human task partners	Novel technology can be a powerful tool for enhancing students' interest in many learning domains. However, the sustainability and overall impact of such interest is unclear. This study tests the longer-term effects of technology on students' task and course interest. The experimental study was conducted with students in foreign language classes (n=†=-†122): a 12-week experimental trial that included pre- and post-course interest, and a sequence of task interest measures. Employing a counterbalanced design, at three week intervals students engaged in separate speaking tasks with each of a Human and ‚ÚúChatbot‚Äù partner. Students' interest in successive tasks and in the course (pre-post), were used to assess differential partner effects and course interest development trajectories. Comparisons of task interest under different partner conditions over time indicated a significant drop in students' task interest with the Chatbot but not Human partner. After accounting for initial course interest, Structural Equation Modelling indicated that only task interest with the Human partner contributed to developing course interest. While Human partner task interest predicted future course interest, task interest under Chatbot partner conditions did not. Under Chatbot partner conditions there was a drop in task interest after the first task: a novelty effect. Implications for theory and practice are discussed.	http://www.sciencedirect.com/science/	There was a decline in interest when using chatbots
4	Social media? It's serious! Understanding the dark side of social media	Research and practice have mostly focused on the ‚Ú0bright side‚Äù of social media, aiming to understand and help in leveraging the manifold opportunities afforded by this technology. However, it is increasingly observable that social media present enormous risks for individuals, communities, firms, and even for society as a whole. Examples for this ‚Ú0dark side‚Äù of social media include cyberbullying, addictive use, trolling, online witch hunts, fake news, and privacy abuse. In this article, we aim to illustrate the multidimensionality of the dark side of social media and describe the related various undesirable outcomes. To do this, we adapt the established social media honeycomb framework to explain the dark side implications of each of the seven functional building blocks: conversations, sharing, presence, relationships, reputation, groups, and identity. On the basis of these reflections, we present a number of avenues for future research, so as to facilitate a better understanding and use of social media.	http://www.sciencedirect.com/science/article/pii/S0263237318300781	
5	A perceived moral agency scale: Development and validation of a metric for humans and social machines	Although current social machine technology cannot fully exhibit the hallmarks of human morality or agency, popular culture representations and emerging technology make it increasingly important to examine human interlocutors‚Äô perception of social machines (e.g., digital assistants, chatbots, robots) as moral agents. To facilitate such scholarship, the notion of perceived moral agency (PMA) is proposed and defined, and a metric developed and validated through two studies: (1) a large-scale online survey featuring potential scale items and concurrent validation metrics for both machine and human targets, and (2) a scale validation study with robots presented as variably agentic and moral. The PMA metric is shown to be reliable, valid, and exhibiting predictive utility.	http://www.sciencedirect.com/science/article/pii/S0747563218304035	
6	Deep learning for affective computing: Text-based emotion recognition in decision support	Emotions widely affect human decision-making. This fact is taken into account by affective computing with the goal of tailoring decision support to the emotional states of individuals. However, the accurate recognition of emotions within narrative documents presents a challenging undertaking due to the complexity and ambiguity of language. Performance improvements can be achieved through deep learning; yet, as demonstrated in this paper, the specific nature of this task requires the customization of recurrent neural networks with regard to bidirectional processing, dropout layers as a means of regularization, and weighted loss functions. In addition, we propose sent2affect, a tailored form of transfer learning for affective computing: here the network is pre-trained for a different task (i.e. sentiment analysis), while the output layer is subsequently tuned to the task of emotion recognition. The resulting performance is evaluated in a holistic setting across 6 benchmark datasets, where we find that both recurrent neural networks and transfer learning consistently outperform traditional machine learning. Altogether, the findings have considerable implications for the use of affective computing.	http://www.sciencedirect.com/science/article/pii/S0167923618301519	
		Alzheimer's screening tests are commonly used by doctors to diagnose the patient's condition and stage as early as possible. Most of these tests are based on pen-paper interaction and do not embrace the advantages provided by new technologies. This paper proposes novel Alzheimer's		

Now we have the results in Excel, initially we can just read the abstract of each article and make a quick decision

if we want to include and discard the literature. In Figure 2, red rows represent excluded literature and green columns represent included literature.

You now should read the remaining papers, there should not be that many left (around 15 - 20 sources). You should aim to critically appraise and summarise each source.

Further Tips

Once you have identified the key articles that relate to your research idea, it is useful to study the reference lists of those key articles for further references that may be useful to you.

If a key theme or author keeps arising in your literature results, then it is well worth conducting further research into this given author

Present your findings

We are now ready to present our findings. Firstly, we need to document our search protocol. You can adapt the template presented in Figure 4 to document your own search protocol.

A search of the online academic database Science Direct was undertaken. The following keywords were used: [insert your keywords]. The keywords were entered in a variety of combinations, with and without the boolean operators AND and OR. Finally, the following inclusion and exclusion criteria was applied:
[list inclusion and exclusion criteria]

The above process resulted in [number] studies (see Table [list of studies]}). These studies acted as a seed for the initial literature review. On critically appraising the studies, frequently occurring citations were investigated and used to support the review.

Finally, we need to present summaries of the studies and any themes that have emerged. You should aim to have approximately ten good quality sources. There are several steps that should be taken:

Summaries each study in a table

The first step is to summaries each of the papers you have, a simple table will suffice.

Appendix B - Ethics Policy & Informed Consent

You will need to complete an Ethics Release form when you submit your Project Outline. Information about Ethnic clearance is available on the Portal and the form creator can be found at https://ethics.app.solent.ac.uk/

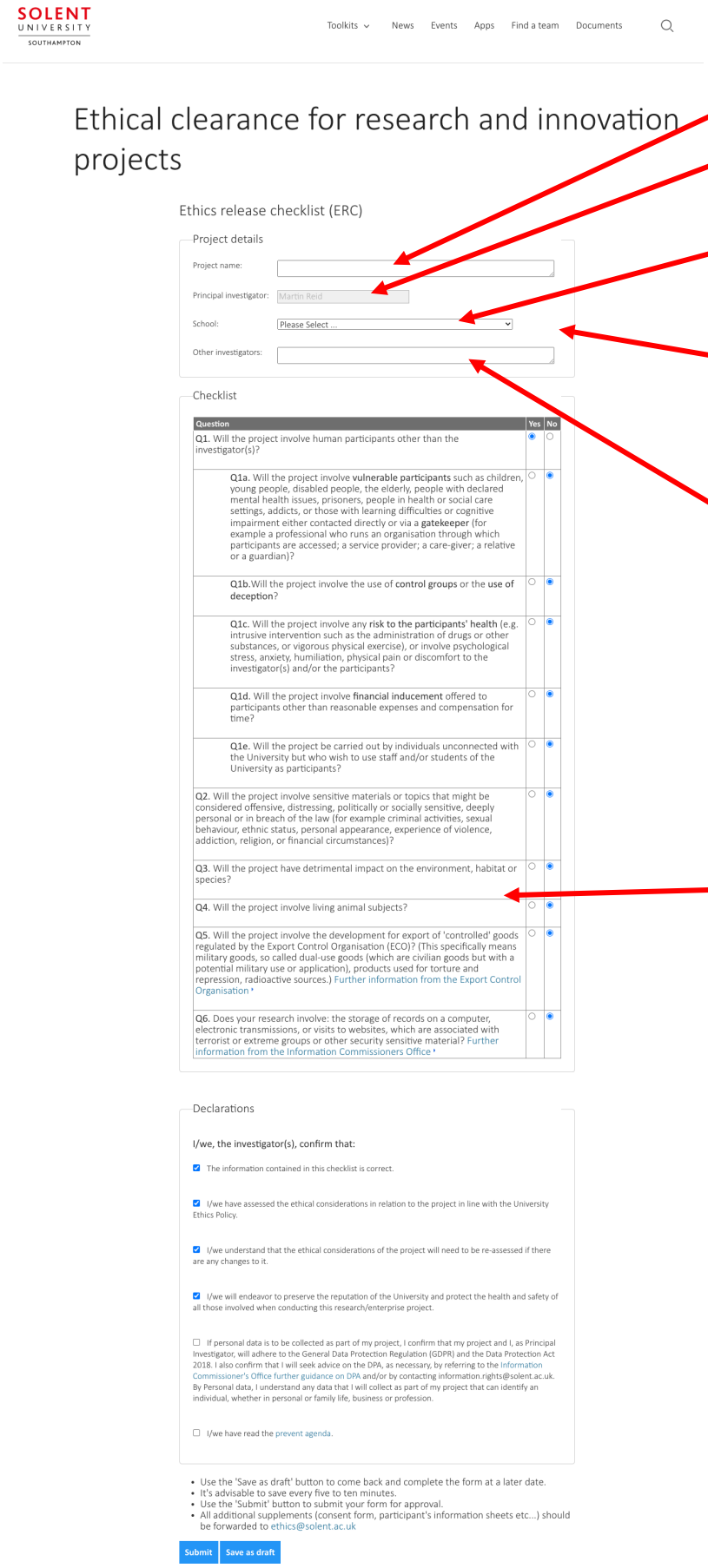
Q1 Will the project involve human participants other than the investigator(s)?
Q1a Will the project involve vulnerable participants such as children, young people, disabled people, the elderly, people with declared mental health issues, prisoners, people in health and social care settings, addicts, or those with learning difficulties or cognitive impairment either contacted directly or via a gatekeeper (for example a professional who runs an organisation through which participants are accessed; a service provider, a care-giver, a relative or a guardian)?
Q1b Will the project involve the use of control groups or the use of deception?
Q1c Will the project involve any risk to the participants' health (e.g. intrusive intervention such as the administration of drugs or other substances, or vigorous physical exercise), or involve psychological stress, anxiety, humiliation, physical pain or discomfort to the investigator(s) and/or the participants?
Q1d Will the project involve financial inducement offered to participants other than reasonable expenses and compensation for time?
Q1e Will the project be carried out by individuals unconnected with the University but who wish to use staff and/or students of the University as participants?
Q2. Will the project involve sensitive materials or topics that might be considered offensive, distressing, politically or socially sensitive, deeply personal or in breach of the law (for example criminal activities, sexual behaviour, ethnic status, personal appearance, experience of violence, addiction, religion, or financial circumstances)?
Q3. Will the project have detrimental impact on the environment, habitat or species?
Q4. Will the project involve living animal subjects?
Q5. Will the project involve the development for export of 'controlled' goods regulated by the Export Control Organisation (ECO)? (This specifically means military goods, so called dual-use goods (which are civilian goods but with a potential military use or application), products used for torture and repression, radioactive sources.)
Q6. Does your research involve: the storage of records on a computer, electronic transmissions, or visits to websites, which are associated with terrorist or extreme groups or other security sensitive material?

Ideally undergraduate computing students project ethics will be either Scenario 1 or 2

SCENARIO 1 - 'NO' to Q1, Q2, Q3, Q4, Q5 & Q6 an Ethics Release applies to the project **(supervisor sign off)**

SCENARIO 2 - 'YES' to Q1 and 'NO' to ALL other questions, including Q1a thru Q1e, an Ethics Release applies to the project. **(supervisor sign off)**

SCENARIO 3 - Any other combination of 'YES' and 'NO'. The proposal must be submitted for a **Full Ethical Review Panel**



Fill in your project name

Your name as Principal Investigator should auto-fill

Select School: School of Media Arts & Technology

Students will see the following inputs: Add your level of study: Undergraduate/Postgraduate

Add your Degree course title & Module code

Look up and add your supervisor

You will be the ONLY investigator so leave this field blank

This shows the form filled in with **Scenario** 2 at listed above

Informed Consent

All participants in your project should give their consent before any data is collected from them. Consent should normally be sought from any participant in advance of their participation

A key part of gaining consent is that ensuring the participant is fully informed about the reason for the study. This means that there should be arrangements in place for explaining the evaluation. This may be in the form of an introductory information. It should:

- Explain why the evaluation is taking place
- Outlines its key aims and objectives
- Assure the respondent of confidentiality and anonymity
- Explain how the information will be used
- Explain how the respondents can receive information about the findings
- Explain how the respondent can find out more information on the study
- Thank the respondent.

Secondly, it must be made clear to participants that they are under no obligation to take part in the survey. It must also be clear to participants that their decision to participate or not participate will not affect the standard of care or service they will receive.

If an individual is sent a questionnaire, and chooses not to fill it in, this is viewed as non-consent. This means that these individuals should not be followed up and asked why they have not completed or returned the questionnaire. To do so would be in breach of ethical principles.

If you are undertaking a User Experience (UX) it will already be the case that Informed Consent forms are already used and are available. If this is not the case download one from the Portal- Download Informed Consent

Find out more about Solent University's Ethics Policy:

SOLENT., 2020. Information for students [viewed 9 July 2020]. Available from: https://www.solent.ac.uk/research-innovation-enterprise/researcher-support/research-integrity/information-for-students

Appendix C - Project Outline Form

Solent University - Computing - Faculty of Business, Law and Digital Technologies

Project Outline
(Formative Assessment Task- Not Graded)

Name	
Course	
Project Title	

What area does your project fall within?

☐ Business Applications	☐ Business Analysis	☐ Computer systems	☐ Cyber security
☐ Data science	☐ Digital design	☐ Internet of things	☐ Networking
☐ Software engineering	☐ User experience (UX)	☐ Web development	☐ Web design front-end
Other please specify:			

What research question needs exploring or what problem/hypothesis will you be testing?
Background/context – Why are you doing this project?
In what ways you are using technology and innovation to address your research question or hypothesis? Is there already something similar? If so, how is your idea/approach different?
What methods do you intend to use to evaluate your project and how will you ethically collect data?
How does your chosen topic relate to your degree title?
Areas of Challenge - In what areas will you need to develop new knowledge and/or skills to complete this project? How will you learn these skills?

Please use this form to draft out Project Outline when completed should not be longer than 2 sides A4. Then copy paste into the project outline online form here

Make sure you have a bibliography list of all useful quality sources and a logbook & project library for when you first meet your project supervisor following the selection process

Appendix D - Logbook & Project Library

Logbook
The logbook is used to record project-related information, which will save time at the write-up stage of the project because you should have recorded the thinking behind the decisions made at each stage. It will cross-reference to information contained within your **Project Library**. It can be produced in a hand-written notebook or digitally.

They should be well organised, and the information must be readily accessible. The logbook should be used as the project's "memory" not just as a diary.

Project Library
A project library should be kept and maintained throughout the duration of the project. This will provide evidence for the claims you make in your written report, and the information held in it should be cross-referenced to your logbook. This may be developed either on paper or digitally.

Your project library should contain any copied or original material pertinent to the project. It may hold:

- Copied journal articles
- Reference material
- Information obtained from websites
- Technical literature
- Specifications and other documents developed during the project (under revision control)
- Data collected from surveys and feedback
- Test results
- Evidence of or links to documentation off experimentation

The project tutor will also wish to see the project library to ensure that background study is taking place in support of the project.

Appendix E – COM616 AE1 Progress Report Brief

Solent University - Coursework Assessment Brief

Module Title:	Dissertation Project (Computing Subject Group)
Module Code:	COM616
Module Leader:	Martin Reid
Level:	6
Assessment Title:	Project Progress
Assessment Number:	AE1
Assessment Type:	Report
Restrictions on Time/Word Count:	2000 (-/+10%) words
Consequence of not meeting time/word count limit:	This assignment should be presented appropriately in line with the restrictions stated above.
Individual/Group:	Individual
Assessment Weighting:	20%
Issue Date:	September 2022
Hand in Date:	**Friday 24th February 2023 16:00hrs**
Planned Feedback Date:	With 4 weeks of submission deadline
Mode of Submission:	On-line
Number of copies to be submitted:	1
Anonymous Marking	This assessment is exempt from anonymous marking.

Learning Outcomes

1. Undertake a significant self-managed project in a planned and systematic fashion.
2. Identify, interpret, deconstruct, compare and integrate theory drawn from a range of appropriate sources.
3. Select, apply, evaluate, make judgements on the appropriateness of methods, tools and technologies.
4. Communicate clearly and concisely verbally, visually and in writing.
5. Apply current professional, ethical and legal guidelines.
6. Reflect critically and constructively on work in progress and final outputs, devising strategies for improvement

Assessment Task

In Phase 1 (semester) you will have submitted a Project Outline and completed an online Ethics Release Form, and both will have bee sign off by your supervisor. You will have done background reading, strengthened your research, academic writing, project management and technical skills. You will have documented all initial project work in a logbook and project library.

You will now be receiving regular support meeting from your project supervisor. In semester 1 wks. 13-14 and semester 2 wks. 1-5, you will work on Phase 2 of your project to prove its feasibility through the production of a 2000-word **Progress Report.** You will have collected most of the information needed in Phase 1 and have this documented in your logbook and project library.

This assessment will be assessed by your supervisor (first grader) and then sample moderated internally and externally.

Areas of focus:
Definition of problem to be solved or research question to be addressed, introduction, background & context of the project, assessment and documentation of suitable sources of literature, production of a 1500-word draft literature survey, requirement/specification, methods, professional, legal and ethical issues project management/planning , Evaluation of techniques, tools, frameworks, platforms, software etc., Documentation of experimentation of technical/design processes and test results and project progress

Structure of the Progress Report **You can write in first person except on the draft literature review. The following suggested structure is offered for guidance and you should discuss this with your project tutor before writing your report:**

Coversheet with your name, course, date and project title.

1) **Introduction -** background & context of project/problem/research question
2) **How will you evaluate your project? -** This section should cover how you will drive and evaluate your project including a strategy for gathering literature sources/documentation, data, feedback plus testing and validation etc. and how you intend to evaluate, organise and analysis all collected information.
3) **What progress have you made on your project?:** What has been done so far to prove the viability of your project moving forward. Results and discussion of any initial surveys, audits etc, assessment and discussion of appropriate guidelines, legal and ethical issues, evaluation of techniques, tools, frameworks, platforms, software etc, documentation of experimentation of technical/design processes and test results.
4) **How will you manage your project? -** a discussion for the final stage including: Assessment & discussion of risks/contingency planning. Selection and timing including appropriate project milestones (400 hours of total work)
5) **What next?** - Based on your project progress, this section will clearly outline the approach you will take in the implementation of your project.
6) **Reference List** - alphabetical list of all sources referenced to in SSU Harvard Style.

   Bibliography List – alphabetical list of all other useful sources collected in SSU Harvard Style.

   Use the Digital Object Identifier (DOI) link for the papers and journals in the Reference and Bibliography lists so your supervisor/marker can easily locate and check them.
7) Appendices
8) **1000 to 1500-word draft literature survey with its own self-contained reference list of quality/peer-reviewed sources. This is to get feedback only; it is not graded or part of the word count.**
9) Plus, a separate appendix items containing any supporting evidence linked to your reporting.

Support for undertaking ALL the tasks/assessments and completing report sections are on the SOL will be presented in the Project Support Lectures and be available in the project handbook and further expanded on SOL

A1-A2	A3-A4	B1-B3	C1-C3	D1-D3	F1-F3
Presentation: report structure, referencing & citation. (LO: 2, 4)					
Excellent presentation and organisation of work and fluent communication in all contexts. Exemplary referencing/citation.	Excellent presentation and organisation of work and fluent communication in most contexts. Referencing/citation comprehensive	Presentation and organisation of work appropriate to context and purpose, communication clear. Referencing/citation consistent and accurate.	Satisfactory organisation and presentation of work, communications mostly appropriate to the context/purpose. Referencing/citation largely consistent/accurate.	Organisation and presentation of work and communications adequate in most contexts, with some mistakes/irrelevancies. Some errors in referencing/citation.	(F1) Elements of disorganisation/poor presentation/poor communication or expression or (F2-F3) Communications too brief or rambling, inappropriate to context or purpose, with many errors/omissions, inadequately expressed/presented. (F1) Errors or (F2-F3) Substantial errors omissions in referencing/citation, or none.
Project progress (LO: 1, 6)					
Consistent high-level competence in all the required specialised practical, technical, creative, scholarly or workrelated skills, with mastery in many areas and developed understanding of professional contexts and expectations	Consistent competence in all the required specialised practical, technical, creative, scholarly or work-related skills, with indications of mastery in some areas and clear understanding of professional contexts and expectations.	Competence in all the required specialised practical, technical, creative, scholarly or work-related skills, with indications of more developed ability in some areas and awareness of professional contexts and expectations	Achieves a basic level of competence in all the required specialised practical, technical, creative, scholarly or work-related skills, with more developed capability in at least one area, and some awareness of professional contexts and expectations.	Basic competence in all the required specialised practical, technical, creative, scholarly or work-related skills, and partial awareness of professional contexts and expectations.	(F1) Marginally or (F2-F3) fails to achieve basic competence in (some of) the required specialised practical, technical, creative, scholarly or work-related skills, and (F1) little or (F2-F3) lacks awareness of professional contexts and expectations.
Project Methodology/Methods, Project evaluation & Testing (LO: 3, 5)					
Designs methods that convincingly address/solve complex, unfamiliar and unpredictable issues/problems.	Applies and refines appropriate methods to address/solve complex, unfamiliar and unpredictable issues/problems.	Selects and applies appropriate methods to address/solve complex, unfamiliar/unpredictable issues/problems.	Uses appropriate (often given) methods to analyse complex/ unfamiliar and/or unpredictable issues/problems, with some evaluation and synthesis of information.	Uses appropriate methods to analyse complex issues/problems, with little evidence of evaluation or synthesis.	(F1) Superficial analysis of complex issues/problems, lacking in evaluation or synthesis. or (F2-F3)

Appendix F – COM616 AE2 Project Report Brief

Solent University - Coursework Assessment Brief

Module Title:	Dissertation Project (Computing Subject Group)
Module Code:	COM616
Module Leader:	Martin Reid
Level:	6
Assessment Title:	Project Report
Assessment Number:	AE2
Assessment Type:	Report
Restrictions on Time/Word Count:	10,000 (-/+10%) words
Consequence of not meeting time/word count limit:	This assignment should be presented appropriately in line with the restrictions stated above.
Individual/Group:	Individual
Assessment Weighting:	70%
Issue Date:	September 2022
Hand in Date:	**Friday 5th May 2023 16:00hrs**
Planned Feedback Date:	With 4 weeks of submission deadline
Mode of Submission:	On-line
Number of copies to be submitted:	1
Anonymous Marking	This assessment is exempt from anonymous marking

Learning Outcomes

1. Undertake a significant self-managed project in a planned and systematic fashion.
2. Identify, interpret, deconstruct, compare and integrate theory drawn from a range of appropriate sources.
3. Select, apply, evaluate, make judgements on the appropriateness of methods, tools and technologies.
4. Communicate clearly and concisely verbally, visually and in writing.
5. Apply current professional, ethical and legal guidelines.
6. Reflect critically and constructively on work in progress and final outputs, devising strategies for improvement

Assessment Task

This report should cover the entire project, from background and context/literature review through selection of methodology, design, implementation and testing to evaluation of the extent to which your project objectives have been met.

Detailed instructions for the presentation and formatting of your report, including an example title page can be found on the module SOL.

This assessment will be double marked by your supervisor (first grader) and second grader, who will then discuss and agree your final grade mark. Then sample moderated internally and externally.

Remember to include a link in your Report to the completed artefact/s and/or information how it can be accessed

Suggested Final Report Structure - The following suggested structure is offered for guidance and you should discuss this with your project tutor before writing your report:

Title Page - Use dissertation template on the assessment tab

Acknowledgements- The acknowledgments are a paragraph which thanks everyone who has helped you.

Acronyms- A list of any abbreviations used within the report

Abstract - This should clarify to the reader why they should read your report, Abstracts are a short summary, one paragraph 300 words max. giving a snapshot of your entire project; why, how, results and conclusions/ recommendations. The Abstract needs to work as a "standalone" so avoid using any citations. Write your Abstract last.

Contents Page - This helps your reader find information easily

List of tables & Figures -These will be two separate lists for your tables & Figures (charts, photos, illustrations etc.)

1. Introduction & Background research question, problem statement or hypothesis
An introduction is an expansion of your project title with a clearly defined problem statement along with a research question or hypothesis. It will present a clear statement of your purpose – Why did you carry out the research? Why are you writing this report?

It will also indicate the scope of your research and define any key terms which aid understanding in the introduction.

2. Literature Review
This is a referenced review of books, journals, scholarly articles, documentation and other quality peer-reviewed sources relevant to your project. It allows you to critically evaluate relevant sources to demonstrate to your readers how your research fits within a larger field of study. It will allow discovery of current ideas, current practice and processes to support the Project's aim.

You need to set your work in the context of previous work with your field of study or problem to solve and identify any gaps in current practice and/or literature, explaining how you intend to address them.

3. Project Specification/Requirements (software product/build project)
This section will vary depending on the type of your project but will outline and justify key decisions taken in relation to both functional and non-functional aspects of the artefacts developed, or the criteria being investigated, platform support, and performance requirements.

4. Methodology
This section will discuss and justify all aspects of the project methods used to undertake the project which could include: How was an initial survey data collected to justify the aims of the project and how they were analysed? How will the project be implemented and tested? How was the finished artefact evaluated? If using qualitative research how are sample sizes -representative of your prospective user base?

Professional, Legal and Ethical issues
How you undertook ethical research and a discussion of all professional, legal and ethical issues associated with your project. A mention of your ethical release will appear in this section with a link to its placement within an appendix.

5. Design & implementation
This section will document the implementation, testing or the conduct of the investigation of your project. There will also be a discussion on any issues/problems that arose and how each was resolved.

6. Results
This section summarises and provides evidence of what has been achieved and will reference additional materials in the appendices. For projects that test a theory or concept, it will analyse the results of the investigation in relation to original expectations and draw conclusions about the theory or concept.

7. Conclusions
This section will evaluate both the process and products of your project based on your previously developed criteria. Note that the 'products' of your project include not just the principle artefact that you have developed, but also design and other documentation associated with the development process. It is also appropriate to discuss the results of any external validation of your artefacts in this section. The evaluation of the process should consider all elements of your project methodology as well as project management issues

8. Recommendations for Further Work and/or discussion
Based upon your evaluation of the process and products of the project you should make recommendations about how the project could be carried forward in the future. For example, what improvements could be made to your system or experiment if you were able to continue further work on your project? If your project was re-scoped at the review stage to ensure it was achievable, this section is likely to discuss elements removed at that point. If your project consisted of creating a design document for a complex system, it might discuss how your design might be implemented.

9. References List
You must include a list of references, in alphabetical order by author, at the end of your report, before the appendices. This must be in the correct SSU Harvard referencing format. The sources listed in your references section must reflect all those cited in the text of your report. However, don't forget that all words and work must be your own and not direct quotes from third party sources. Use the Digital Object Identifier (DOI) link for the papers and journals in this list so your supervisor/marker can easily locate and check them.

10. Bibliography List
Bibliography lists sources that you did not cite in your report, but that you referred to for information during the project. This list should also be presented in SSU Harvard referencing format in alphabetical order by author. Remember to use Digital Object Identifier (DOI) on this list too.

13. Appendices
An appendix normally includes research related material that does not fit easily or suitably in the body of the paper.

A1-A2	A3-A4	B1-B3	C1-C3	D1-D3	F1-F3
Presentation, Reporting, Referencing & Citation. Introduction, Background/context, Requirements/Specification (LO 1, 4)					
Exceptional writing style, presentation and organisation of work and fluent communication in all contexts. **Exemplary referencing/citation.** Report shows 400 hours of study	**Excellent writing style, presentation and organisation of work** and fluent communication in most contexts. **Referencing/citation comprehensive. Proof of 400 hours of study.** Report shows of 400 hours of study	**Writing style, presentation and organisation of work appropriate to context and purpose,** communication clear. **Referencing/citation consistent and accurate.** Report shows of 400 hours of study	**Satisfactory writing style, organisation and presentation of work, communications mostly appropriate** to the context/purpose. **Referencing/citation largely consistent/accurate**. Report show of 400 hours of study	**Organisation, writing style and presentation of work and communications adequate in most contexts**, with some mistakes/irrelevancies. **Some errors in referencing/citation.** Report fails to show of 400 hours of study	(F1) **Elements of disorganisation/poor presentation/poor communication** or expression or (F2-F3) Communications too brief or rambling, inappropriate to context or purpose, with many errors/omissions, inadequately expressed/presented. (F1) Errors or (F2-F3) Substantial errors omissions in referencing/citation, or none. Report fails to show of 400 hours of study
Literature Review (LO 2)					
Consistent high-level competence in all the required specialised practical, technical, scholarly or work-related skills, with mastery in many areas and developed understanding of professional contexts and expectations. **ALL sources of high quality/peer-reviewed**	Consistent competence in all the required specialised practical, technical, scholarly or work-related skills, with indications of mastery in some areas and clear understanding of professional contexts and expectations. **MAJORITY of sources of high quality/peer-reviewed**	Competence in all the required specialised practical, technical, scholarly or work-related skills, with indications of more developed ability in some areas and awareness of professional contexts and expectations. **MOST sources of high quality/peer-reviewed**	Achieves a basic level of competence in all the required specialised practical, technical, scholarly or work-related skills, with more developed capability in at least one area, and some awareness of professional contexts and expectations. **SATISFACTORY number of sources of high quality/peer-reviewed**	Basic competence in all the required specialised practical, technical, scholarly or work-related skills, and partial awareness of professional contexts and expectations. **VERY FEW sources of high quality/peer-reviewed**	(F1) Marginally or (F2-F3) fails to achieve basic competence in (some of) the required specialised practical, technical, creative, scholarly or work-related skills, and (F1) little or (F2-F3) lacks awareness of professional contexts and expectations. **VERY FEW or NO sources of high quality/peer-reviewed**
Project Methodology, Project Management & Professional Practice (LO 5)					
Designs methods that convincingly address/solve complex, unfamiliar and unpredictable issues/problems..	Applies and refines appropriate methods to address/solve complex, unfamiliar and unpredictable issues/problems.	Selects and applies appropriate methods to address/solve complex, unfamiliar/unpredictable issues/problems.	Uses appropriate (often given) methods to analyse complex/ unfamiliar and/or unpredictable issues/problems, with some evaluation and synthesis of information.	Uses appropriate methods to analyse complex issues/problems, with little evidence of evaluation or synthesis	F1) Superficial analysis of complex issues/problems, lacking in evaluation or synthesis. or (F2-F3) Relies on description rather than analysis with no evidence of evaluation or synthesis.
Design/Implementation, Testing, Artefact/s & supporting Documentation (LO 3)					
Exceptional artefact that goes far beyond what has been delivered on course, attention to industry standards and expectations for a Level 6 student	**Excellent artefact that goes beyond what has been delivered on course, attention to industry standards and expectations for a Level 6 student.**	**Very Good artefact that goes beyond what has been delivered on course, attention to industry standards and expectations for a Level 6 student.**	**Artefact does not go beyond what has been delivered on course, attention to industry standards and expectations for a Level 6 student.**	**Artefact falls below what has been delivered on course, attention to industry standards and expectations for a Level 6 student. Functionality basic**	**(Poor Artefact which falls below what has been delivered on course, attention to industry standards and expectations for a Level 6 student. Lacks functionality/does not work**
Evaluation, conclusions & Recommendations (LO 6)					
Creative/original/compelling conclusions or practical solutions;convincingly justified/argued/evidenced.	**Insightful conclusions/ practical solutions closely argued/**evidencedshowing originality and creativity in several aspects.	**Conclusions/practical solutions logically argued**/evidenced, with some aspect ofinsight, creativity or originality.	**Mostly relevant argument/evidence supports logical conclusions**/practical solutions showing some critical insight and limited creativity or originality.	**Few conclusions/practical solutions sparsely argued/evidenced**, mainly derivativeand with little critical insight.	(F1) Sparse conclusions/practical solutions insufficiently argued/evidenced and mostly derivative, with marginally insufficient critical insight or creativity or originality. or (F2-F3) Conclusions/practical solutions absent/superficial/flawed, insufficiently argued/evidenced and lacks critical insight or creativity or originality.

Appendix G – COM616 AE3 Poster Presentation Brief

Solent University - Coursework Assessment Brief

Module Title:	Dissertation Project (Computing Subject Group)
Module Code:	COM616
Module Leader:	Martin Reid
Level:	6
Assessment Title:	Poster Presentation
Assessment Number:	AE3
Assessment Type:	Presentation
Restrictions on Time/Word Count:	**15 minutes (approx.**) (**10min** Presentation & **5** Demo **follow up** Q&A) Computing degree show – week of 15/5/2022 (2hr event)
Consequence of not meeting time/word count limit:	n/a
Individual/Group:	Individual
Assessment Weighting:	10%
Issue Date:	September 2022
Hand in Date:	**Friday 12th May 2023 16:00hrs**
Planned Feedback Date:	With 4 weeks of submission deadline
Mode of Submission:	Presentation & online submission
Number of copies to be submitted:	1
Anonymous Marking	This assessment is exempt from anonymous marking

Learning Outcomes

1. Undertake a significant self-managed project in a planned and systematic fashion.
2. Identify, interpret, deconstruct, compare and integrate theory drawn from a range of appropriate sources.
3. Select, apply, evaluate, make judgements on the appropriateness of methods, tools and technologies.
4. Communicate clearly and concisely verbally, visually and in writing.
5. Apply current professional, ethical and legal guidelines.
6. Reflect critically and constructively on work in progress and final outputs, devising strategies for improvement

Assessment Task

This assessment is concerned with your ability to communicate information about your project. You are required to:

a) prepare and display presentation materials that allow someone who has no prior knowledge of your project to quickly grasp a basic understanding of what has been achieved in your project
b) respond to questions about any aspect of your project

This assessment will bring together all your work and evaluation at the Computing degree show. This event will involve the production of an academic AE1 style poster, which communicates your project lifecycle and there will be an opportunity to get real-word feedback from industry visitors.

You will create a video presentation of you present your project life cycle with the support of your poster: (10 mins approx.) plus a demonstration of what you have produced (5 mins approx.) and your supervisor (first grader) will follow up with a question and answers session which will take place online.

The poster and demo will then be displayed at the Computing degree show week of 15/5/2022 (2 hrs event) details to follow

This assessment will be assessed by your supervisor (first grader) and then sample moderated internally and externally.

A1-A2	A3-A4	B1-B3	C1-C3	D1-D3	F1-F3
Overall Presentation (LO: 1, 4)					
Exceptional presentation and organisation of work and fluent communication in all contexts.	**Excellent presentation** and organisation of work and fluent communication in most contexts.	**Presentation and organisation of work appropriate to context and purpose, communication clear.**	**Satisfactory organisation and presentation of work**, communications mostly appropriate to the context/purpose.	**Organisation and presentation of work and communications adequate** in most contexts, with some mistakes/irrelevancies.	**Elements of disorganisation/poor presentation/poor communication or expression** or Communications too brief or rambling, inappropriate to context or purpose, with many errors/omissions, inadequately expressed/presented.
Presentation of Artefact/s (LO: 3)					
Consistent high-level competence in all the required specialised practical, technical innovation, creative, with mastery in many areas and developed understanding of professional contexts and expectations. **Exceptional demonstration that proves the artefact goes far beyond what has been delivered course, attention to industry standards and expectations for a Level 6 student.**	**Consistent competence in all the required** specialised practical, technical innovation, creative, with indications of mastery in some areas and clear understanding of professional contexts and expectations. **Excellent demonstration that proves the artefact goes beyond what has been delivered course, attention to industry standards and expectations for a Level 6 student.**	**Competence in all the required** specialised practical, technical, creative, scholarly or work-related skills, with indications of more developed ability in some areas and awareness of professional contexts and expectations. **Very Good demonstration that proves the artefact goes beyond what has been delivered course, attention to industry standards and expectations for a Level 6 student.**	**Achieves a basic level of competence in all the required** specialised practical, technical, creative, scholarly or work-related skills, with more developed capability in at least one area, and some awareness of professional contexts and expectations. **Demonstration shows that the artefact is equal to what has been delivered on course, attention to industry standards and expectations for a Level 6 student.**	**Basic competence in all the required** specialised practical, technical, creative, scholarly or work-related skills, and partial awareness of professional contexts and expectations. **Demonstration** shows that the **artefact falls below what has been delivered on course, attention to industry standards and expectations for a Level 6 student. Basic functionality**	**Marginally or fails to achieve basic competence in (some of) the required** specialised practical, technical, creative, scholarly or work-related skills, and little or lacks awareness of professional contexts and expectations. **Demonstration shows that the artefact** is p**oor, lacks functionality or does not work, and falls well below what has been delivered on course, attention to industry standards and expectations for a Level 6 student.**
Response to Questions (LO: 6)					
Exceptional responses, fluent communication in all contexts	**Excellent fluent responses** in most contexts	**Responses appropriate** to context and purpose, communication clear	**Satisfactory responses** mostly appropriate to the context/purpose	**Responses adequate in most contexts**, with some mistakes/irrelevancies	**Responses disorganisation/poor presentation/poor communication or expression**

Important Information

Late Submissions

You are reminded that:

i. If this assessment is submitted late i.e. within 7 calendar days of the submission deadline, the mark will be capped at 40% if a pass mark is achieved;
ii. If this assessment is submitted later than 7 calendar days after the submission deadline, the work will be regarded as a non-submission and will be awarded a zero;
iii. If this assessment is being submitted as a referred piece of work, then it must be submitted by the deadline date; any Refer assessment submitted late will be regarded as a non-submission and will be awarded a zero.

Assessment regulations

Extenuating Circumstances

The University's Extenuating Circumstances (EC) procedure is in place if there are genuine short term exceptional circumstances that may prevent you submitting an assessment. If you are not 'fit to study', you can either request an extension to the submission deadline of 7 calendar days or you can request to submit the assessment at the next opportunity, i.e. the resit period (as a Defer without capping of the grade). In both instances you must submit an EC application with relevant evidence. If accepted under the university regulations there will be no academic penalty for late submission or non-submission dependent on what is requested. You are reminded that EC covers only short term issues (20 working days) and that if you experience longer term matters that impact on your learning then you must contact the Student Hub for advice.

Please find a link to the EC policy below:

Extenuating Circumstances

Academic Misconduct
Any submission must be your own work and, where facts or ideas have been used from other sources, these sources must be appropriately referenced. The University's Academic Handbook includes the definitions of all practices that will be deemed to constitute academic misconduct. You should check this link before submitting your work.

Procedures relating to student academic misconduct are given below:

Academic Misconduct

Ethics Policy
The work being carried out must be in compliance with the university Ethics Policy. Where there is an ethical issue, as specified within the Ethics Policy, then you will need an ethics release or ethics approval prior to the start of the project.

The Ethics Policy is contained within Section 2S of the Academic Handbook:

Ethics Policy

Grade marking
The University uses an alpha numeric grade scale for the marking of assessments. Unless you have been specifically informed otherwise your marked assignment will be awarded a letter/number grade. More detailed information on grade marking and the grade scale can be found on the portal and in the Student Handbook.

Grade Marking Scale

Guidance for online submission through Solent Online Learning (SOL)

Online Submission