# Appendix C - Detailed Project Proposal

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| First Name: |  |
| Last Name: |  |
| Student Number: |  |
| Supervisor: |  |

## Defining your Project

**1.1 Detailed research question/problem**

**Help:** Your detailed research question is the statement of a problem within the computing domain, which you will address in your project. Refining the research question involves narrowing down an initial question until it is answerable using a primary research method(s) that you will conduct during the time of your project. The refined research question must not be so general that it is answerable with a yes or no answer. It must not be so broad that you would be unable to achieve a solution during your project. The key to this is BEING SPECIFIC: Narrow down the method or technology you will use, narrow down the group that the question refers to (localize a general question) If the project is still ‘too big’, can you think of a way to work on a part of the problem? Avoid using words that cannot be measured, by you, without a huge research budget e.g. 'effects on society', 'effects on business'. *Example:* The initial question "Does cloud computing effect business" needs narrowing down *(for a start the answer is yes) W*hat is meant by cloud computing? Or 'effect'? Or 'business', in this question? Refining this first question will involve narrowing it down to something you, personally, can measure. A refined version of this question might be: "Does implementing a cloud based voting system improve the speed of decision making in a small company in Aberdeen?" This refined question is implementable: You can now identify a small company to work with, document their current decision making processes, implement a cloud based voting system, compare decision making speeds over a limited time period (say 1 month) and evaluate your findings. *A small piece of genuinely new knowledge is produced.*

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**1.2 Keywords**

**Help:** Include up to 6 keywords separated by a semi-colon; what keywords are appropriate to describe your project in an online database like Google Scholar? Keywords should include the general research area and the specific technologies you will be working with. *Example.* A project that proposes a novel way of visualising large amounts of twitter feed data may have the keywords: Data visualisation; twitter; hashtags; database design; graphics libraries.

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**1.3 Project title**

**Help:** The project title is a statement based on your detailed research question. For example, the research question *'to what extent does a mobile application reduce the number of errors made in class registers at RGU in comparison to current paper based registers'* may be stated in the project title*: "A Wi-Fi driven mobile application for large group registers using iBeacons".*

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**1.4 Client, Audience and Motivation:**

**Help:** Why is this project important? To whom is this project important? A project must address a question/problem that generates a small piece of new knowledge/solution. This new knowledge/solution must be important to a named group or to a specific client (such as a company, an academic audience, policy makers, people with disabilities) to make it worthwhile carrying out. This is the ***motivation*** for your project. In this section you should address who will benefit from your findings and how they will benefit. Example: If you intend to demonstrate that a mobile application that automates class registers at RGU will be more efficient than paper based registers - the group who would be interested in knowing/applying these findings would be both academic and administrative staff at RGU and they would benefit by time saved and a reduction in their administrative workload. If you are making a business case for an organization explain how the organisation will benefit from your findings.

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**1.5 Project Plan**

**Help:** This is the project plan as to how you will go about achieving the objectives of the project. It must include the methods you plan to use such as for example experiments, applications or software demonstrators, process models, surveys, analysis of generated data …  
  
Example: In the class register example above "to what extent does a mobile application reduce the number of errors made in class registers at RGU in comparison to current paper based registers" - the research plan may involve: 1) Collecting and analysing paper based registers in a given class on five occasions. 2) Identifying the error rate average on these occasions 3) Designing and implementing a mobile application that automatically records attendance in class. 4) Deploying the application in the class on five occasions. 5) Identifying the error rate average of the mobile application on these occasions. 6) Comparison of data and summary of findings.

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This is the end of section one.

## Section Two: abstract and initial literature review

**2.1 Abstract**

**Help:** An abstract is a short summary of the project that enables others to know if your report is relevant to them without reading the whole report. It is usually written retrospectively so that it can include findings and results. It is fully expected that you will rewrite your abstract when you come to write your final paper. For now, you should write an abstract of about 250 words that define the project described in section one. Before writing your abstract you MUST read some abstracts from conference or journal papers on *Google Scholar* or from *portal.acm.org* (to understand their style) and then provide your own abstract that outlines what your question is and what you 'did' to answer it.

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**2.2 Initial/Mini Literature Review (500 words maximum)**

**Help:** A literature review is a select analysis of current existing research, which is relevant to your topic, showing how it relates to your investigation. It explains and justifies how your investigation may help answer some of the questions or gaps in this area of research. A literature review is not a straightforward summary of everything you have read on the topic and it is not a chronological description of what was discovered in your field. Use your literature review to:

• compare and contrast different authors' views on an issue  
• criticise aspects of methodology, note areas in which authors are in disagreement  
• highlight exemplary studies  
• highlight gaps in research  
• show how your study relates to previous studies

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**2.3 Relevant professional, social, ethical, security and legal issues to the project**

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**2.4 Bibliography (key texts for your literature review)**

**Help:** Please provide references, in correct Harvard style, for at least three key texts that have informed your literature review. If you are implementing an application, select texts, which demonstrate how other researchers have tackled similar implementations? The references should be recent and sufficiently technical or academic. Your markers will be looking for you to identify technical reports, conference papers, journal papers, and recent textbooks. Avoid *Wikipedia* entries, newspaper reports that do not cite sources, and general or introductory texts.

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This is the end of section two.

# Appendix D - Detailed Project Proposal Grading and Feedback Commentary

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| Student name: |  |
| Supervisor Name: |  |

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| **Research question/problem** |  |
| *In awarding a grade the following will be considered:*   * That the research question/problem is well formed and achievable * That the research question/problem is specific and free from untestable generalisation * That the proposed project represents an appropriate level of challenge to a honours undergraduate * That the method(s) proposed are appropriate and achievable and demonstrate application of a sound methodology |  |
| **Thoroughness of the proposal.** |  |
| *In awarding a grade the following will be considered:*   * That the student has thought through the potential impact and audience for the project * Relevant professional, social, legal, security and ethical issues have been identified * That initial references are appropriate, up to date and academic * That the Literature Review sample demonstrates a critical approach to current literature and clearly relates to the research question. * That, taken as a whole, the proposal is clear and complete. |  |
| **Ethical Form**  Yes/No |  |

## Supervisor feedback and commentary

You should expect comments from your supervisor on

* the level of challenge
* achievability and refinement of the research question/problem
* suggestions for narrowing down and making specific the research question/problem or identifying terms that require more specific definition
* how well the methods proposed fit the research question/problem
* suggestions for improving the project plan to make it scientifically rigorous, appropriate and achievable
* whether the literature review sample demonstrates a critical approach to current academic literature and relates the literature to the student’s research question
* references are accurate and in Harvard style

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|  | **Research question and primary research method in relation to learning outcomes** | **Thoroughness of the proposal.** |
| **Grade A** | A well-considered project proposal that fully satisfies the Learning outcomes for which there is a succinct and focused aim with an associated project  A question or hypothesis that is well above norm for final-year undergraduate project level  The project involves improving or developing a complex programme, tool, application or the enhancement of a theory or methodology or their application in a new context. The project demonstrates a high degree of innovation and creativity | All fields completed demonstrating a clear blueprint for the process and includes the necessary information with respect to the question/problem.  Research/project methods are well-considered with clear reasoning for choice of those methods over others;  A clear justification of the need for the project in relation to client or audience.  Projects proposals involving 'business case' reports clearly identify the organisation involved and consider how the case will be evaluated.  Sample literature review demonstrates a critical approach to current literature and clearly relates to the research question/problem.  Relevant professional, ethical, social, security and legal issues are clearly identified. |
| **Grade B** | Very good project proposal that satisfies the Learning outcomes for which there is a focused aim with an associated project.  A question or hypothesis is very good. The project involves improving or developing a fairly complex programme, tool, application or the enhancement of a theory or methodology or their application. | As grade A, but some weakness in one aspect.  Relevant professional, ethical, social and legal issues are clearly identified. |
| **Grade C** | Good project proposal that satisfies the Learning outcomes for which there is a focused aim with an associated project.  A question or hypothesis is good. The project involves improving or developing a programme, tool or application. | As grade A, but substantial failure in one aspect or minor deficiency in more than one aspect.  Relevant professional, ethical, social, security and legal issues are clearly identified. |
| **Grade D** | Adequate project proposal that identifies an activity with some consideration of a broader context.  A question/problem which lacks enough substance, context and scope to allow for depth of analysis, but which is marginally acceptable against a threshold for final year undergraduate projects;  Method(s) which only just relate to the production of an appropriate solution to the question/problem. | Completion of sections is cursory or minimal with some cohesiveness and contextualisation.  Sections demonstrate some understanding of the project process involved which loosely links with idea outlined (key question, method, audience).  Methods are discussed but demonstrate little consideration as to whether they are the most appropriate and lack refinement and further detail.  Literature review sample may only list examined research/problem, without critically evaluating it. Literature reviewed may not relate well to the research question/problem  Relevant professional, ethical, social, security and legal issues are clearly identified. |
| **Grade E** | Border line project proposal. | Very minimal effort but still some evidence of the required sections. |
| **Grade F** | Minimal effort has been made.  No ethical form | Minimal effort has been made. |