*INSTRUCTIONS for Report and Bi-weekly Updates:*

*This is a sample template[[1]](#footnote-1) that should be used for your CS 490 project report or research paper. You must include text for each section and you can continuously update it as you work through the major sections of this document. It is NOT necessary to complete every section right now, but you should update and expand it each week as you progress through the semester*. *It is OK to delete previous statements and rewrite new ones for each submission.*

*You will need to submit versions of this every two weeks, so please keep updating it. The first version is due in class in three weeks, February 17, 2016. By then, you will have written (or at least articulated) your ideas and references in class so they can be added to this document.*

*The final version is of this report is due on the last day of class, May 5, 2017.*

*REMOVE these boxes in your final report and update the DATE with each version that is submitted throughout the semester. Each week, please highlight the new text (somehow) that you inserted or changed from the previous week.*

**CS 490**

*Relational Database: Data Retrieval Using Java Graphical User Interface (GUI)*

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*DATE: February 3, 2017*

**Abstract**

Content and scope of your project

The JavaGUI490 is a project that aims to offer a friendly user experience in accessing and retrieving data from a relational database. The application will model a subset of a medical clinic environment.

Capture all significant aspects of your work.

This project will focus on building a relational database that will represent a medical clinic abstraction by persisting data about each clinic staff as well as the patients of the clinic.

identifies the project objective, its methodology, and intended results.

JavaGUI490 primary goal is to serve as an intermediate tool between the user and the database.

**I. Introduction**

This is a *general* introduction to what the entire report is all about -- it is *not* just a description of the contents of each section. Briefly *summarize* your project/research question (you will be stating the question in detail below), some of the reasons why it is a worthwhile, and perhaps give an overview of your main results. This is a birds-eye view of the answers to the main questions answered in the report.

**II. “Background Information”**

A brief section giving background information may be necessary, especially if your work spans two or more traditional fields. That means that your readers may not have any experience with some of the material needed to follow your thesis, so you need to give it to them. A different title for this section other than that given above (i.e*. Background Information*) is usually better; e.g., "A Brief Review of Frammis Algebra," but not required.

**III. “Research Question or Problem Statement”**

Engineering projects or research papers tend to refer to a "problem" to be solved where other disciplines talk in terms of a "question" to be answered. In either case, this section has three main parts:

1. a concise statement of the question that your project or paper tackles,  2. an explanation by direct reference to “Background Information” (Section II) of how your question relates to previous work,  3. a discussion of why you believe it is worthwhile to answer this question.

Item 2 is where you draw on the background information which you presented the Section II. For example, maybe your problem is to "develop a Zylon algorithm capable of handling very large scale problems in reasonable time" (you would further describe what you mean by "large scale" and "reasonable time" in the problem statement). In the last part of this section, you would explain why having a large-scale fast Zylon algorithm is useful; e.g., by describing applications where it can be used.

Since this is one of the sections that the readers are *definitely* looking for, highlight it by using the word "problem" or "question" in the title: e.g. “Research Question or Problem Statement”, or maybe something more specific such as "The Large-Scale Zylon Algorithm Problem."

**IV. “Solution Strategies and/or Methods Used to Answer the Question”**

This part of the report is much more free-form. It may have one or several sections and subsections. But it all has only one purpose: to convince the examiners that you tried to answer the question or made progress towards solving the problem that you set for yourself in Section III.

So show what you did towards answering the question or solving the problem: if there were blind alleys and dead ends, you can include these, along with failed directions specifically relevant to the demonstration that you answered the thesis question.

Please include discussion that address these points; you can turn each of these into subsections or additional sections:

1. **Information gathering** – what references did/will you need to consult as you make your way towards solving the problem? Add these to your reference list at the end of this paper. Use the correct citation style for computer science references.
2. **Research timeline** – what are your short-term, intermediate and long-term goals for this project or research paper? What milestones do you plan to meet as the weeks’ progress?   
   *(All students are expected to do a dry run of their presentation by the date stated on the class syllabus.)*
3. **Research plan/solution approach** – What approach will you take to work towards your milestones? What will you need to study further to make progress? Will/did you adopt a software lifecycle model?
4. **Evaluation plan** - How will you decide if your results are valid? If you are building software, how will it be evaluated? If you writing a survey paper, how will you decide which information is relevant to include?
5. **Resources** – what software and/or hardware resources did/will you employ?
6. **Results** – summarize your accomplishments towards solving the problem.
7. **Discussion** - Were your results what you expected to accomplish? Did you meet the milestones in your timeline? How were your results evaluated?

**V. Conclusions**

You generally cover three things in the Conclusions section, and each of these usually merits a separate subsection: 1. Conclusions  2. Summary of Contributions  3. Future Research

Conclusions are *not* a rambling summary of the report: they are *short*, *concise* statements of what you have done. All conclusions should be directly related to the research question stated in Section III.

The Summary of Contributions will be much sought and carefully read by the examiners (i.e. other students, your professors, outside reviewers.) Here, you list the contributions of the semester in CS 490.

The Future Research subsection is included so that researchers picking up this work in future have the benefit of the ideas that you generated while you were working on the project. If you are planning to continue working on this project or research paper, you can indicate what you would do next.

**References**

All references given *must* be referred to in the main body of the report. Note the difference from a Bibliography, which may include works that are not directly referenced in the report. Organize the list of references either alphabetically by author surname (preferred), or by order of citation in the report. Use the accepted format for computer science citations.

**Appendices**

What goes in the appendices? Any material that impedes the smooth development of your presentation, but which is important to justify the results of a report. Generally it is material that is of too nitty-gritty a level of detail for inclusion in the main body of the thesis, but which should be available for perusal by the examiners to convince them sufficiently. Examples include program listings, immense tables of data, lengthy mathematical proofs or derivations, user manuals, etc.

***Final Notes:***

*If you are considering submitting a paper to a conference, please come talk to me further.*

1. This outline is adapted from Professor John Chinneck’s online document, *“How to Organize your Thesis*,” Carleton University , 1999, http://www.sce.carleton.ca/faculty/chinneck/thesis.html [↑](#footnote-ref-1)