Honours Project: Supervisor’s Notes

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October 25, 2012

This document is under construction, and may change from time to time. The most recent version, with the date of latest change should be available at http: // www. cs. sun. ac. za/~ kroon. If you have suggestions for this document, please contact Steve Kroon.

Meetings

As soon as possible after the projects are allocated, you should meet with your supervisor. At this first meeting, you should decide when, where, and how often you should meet. This is usually left at the student’s discretion, and may be changed later. My best advice is to meet uncomfortably often, to keep the pressure on yourself to work hard. In any case, it is the student’s responsibility to initiate meetings — otherwise, the supervisor may simply assume the student is coping without supervision, while the student may be going seriously off-track.

When meetings are held the student should:

- email the supervisor the day before the meeting indicating what they would like to discuss;
- keep record of the discussion at the meeting, as necessary; and
- directly after the meeting, send the supervisor a summary of the salient points of the meeting, including any action items for yourself or him/her.

Other student responsibilities

- If you need (access to) certain resources for your project, inform your supervisor by email so that suitable arrangements can be made. Do not assume he knows, or tell him in person only. The earlier you provide this information the better, since the wheels of administration can often run very slowly.

Project management

A key aspect of your year project is managing your time wisely, and making sure you invest enough time from early on in working on your project. As such the first thing you should do after establishing the scope of the project is to set up an initial timeline for completing the various aspects of the project: not
only the implementation, but also the various documents and presentations you
need to prepare (see the following section).

On your timeline, also make provision for times to review and update the
project timeline for the rest of the year.

Version control

All documents and source code you work on should be placed under version
control in a repository to which I have read access (please send me the details
of any repositories you use). This includes your presentations, your project
website, and the various reports you submit during the course of the project.
If you do not have access to a suitable repository, I can provide you with a
repository using Git — please contact me in this regard if necessary.

Documents

First, your supervisor is not a spell-checking or grammar-checking service. Thus,
it is expected of you to take the trouble to properly proof-read and edit docu-
ments you send to him/her or submit for marks. (Your supervisor may provide
you with pointers and advice in this direction, but you should not rely on it.
Another under-construction document which may help you — please suggest ad-
ditions — is http://www.cs.sun.ac.za/~kroon/notes_for_students.html.)

Please ensure that all documents you submit to your supervisor are date-
stamped — (s)he will often see versions of documents from different dates, and
this makes things considerably easier.

In your project report and documents, clearly distinguish between: the ul-
timate goal of any larger project your project is part of; the goals within the
scope of your project (distinguish between core/essential and optional goals);
the goals you actually achieved; and future work. Do not try to give the reader
an inaccurate impression of what you did in any way.

Documents you will need to submit typically include: user requirements;
system requirements; implementation/source code; a testing plan and the ac-
companying tests; mid-year and final presentations; and a final report collating
the various other documents. Please discuss with me if you think this breakdown
does not apply to your project.

Grammar and style advice

• Ensure you use “a” vs. “an” correctly.
• “Amount” is for continuous values, “number” for discrete values.
• Note the following verb-preposition pairings — stray from them at your
  own peril: comply with (not to).
• Capitalize “Section”, “Figure”, “Table”, etc. when they are followed by a
  number.
• When referring to a table or figure on a different page, give the page
  number with the reference to the table/figure.
• It’s “e.g.” and “i.e.”, not “eg.”, “eg”, “ie.” or “ie”.

• A word after a semi-colon should not be capitalized purely due to this fact.

• Learn the difference between “affect” and “effect”.

• Learn the difference between “use” and “utilize” (see http://www.technovelty.org/code/badcode/utilising.html).

• Be consistent in your use of tense

• Concord: pair singular nouns with singular verbs and plural nouns with plural verbs

• Avoid unnecessary use of “that is”: rather say “method used” than “method that is used”

• If you start a sentence with a phrase beginning with a preposition, there should generally be a comma after the phrase

• A “term” is an expression in a sum; a “factor” is an expression in a product

• For each abbreviation in your report/thesis, write out what it stands for the first time that you use it. Also add a reference for later use in a list of abbreviations.

• Learn the proper use of “who”, “that”, and “which”: When referring to people, use “who”. The goose “that” lays the golden eggs; not the goose “which” lays the golden eggs — this is because laying golden eggs defines which goose you are writing about. On the other hand: “private variables which are only accessible by the object itself”, not “‘private variables that are only accessible by the object itself”. Here the phrase after “which” provides extra information, but does not modify/restrict the object being referred to.

Typesetting advice

• To put something in quotes, surround it by ‘‘ and ’’ on the left and right, not ” on both sides.

Bibliography advice

• Your bibliography must be in alphabetical order. In addition, consider using Jaco Geldenhuys’s bibcite package so that the occurrences of various citations can appear in/with the bibliography.

• When referencing content on websites, save a copy of the page when you access it. Your reference should specify the date you accessed and saved the content. If the source supports versioning, a version number is encouraged.
User and system requirements

Note that if a requirement is not verifiable to some extent, it is not a true requirement. You should not have requirements without a verification plan. In addition, as part of the testing phase, you should ensure that the verification of the various requirements has been performed. A table showing success or failure for each, with notes as necessary might be a good approach.

Presentations

You will need to make two presentations during the year: one in the middle of the year, and the other your final presentation. It is usually a good idea if you can present a live demonstration of your project, or a video showing highlights of it being used if that is not practical.

Presentation advice

- Do not speak too fast.
- Make sure you speak loudly enough.
- Say more, not less, than is on your slides.
- Check your presentation on a projector in advance to make sure colours display properly on the wall/screen. Also check that it displays well in both natural and artificial light.
- Ensure your slides are numbered. The audience often wants to refer back to a specific slide, and this makes it easier for them.
- If you are going to use Beamer, avoid the default theme (Warsaw). In other words, differentiate your presentation from others: besides the theme, consider using a different font.
- Try to use pictures, diagrams, and even animations, on your slides rather than text.
- Try to be precise and careful in how you present concepts. A little extra time introducing the basics will save you time clarifying things later in the presentation.
- A video or demo of your project in action can be very useful. Remember to schedule time for the demo.
- Your presentation should include information on your testing plan, and your project schedule.
- When presenting your schedule for your project, make sure the projected view is large enough that the audience can see enough detail. A cluttered Gantt chart does no help to anyone.

Project website

It is recommended that your project have a website. This website should, at the least, have a summary of your project goals and a document repository. You should be given space on a web server to set up this website. Contact me if this is not the case.