Coding Project Final Report

A Sample Document for
Generating Consistent Professional Reports

Prepared by
John T. Bell
for use in CS 440
at the
University of Illinois Chicago

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Dealing With Material that is Unwanted (Right Now)

Much of this document includes material that is not needed for every project, and/or which may not have been written yet, and so should be removed before printing or distributing the document. There are several ways to do this, however each has their drawbacks:

1. *Delete the material completely. The drawback is that now it is completely gone, and the only way to get it back is to copy it from some other document, if that is even available.*

2. *Change the font to "Hidden". The drawback is that this does not affect the numbering of sections, either in the text or in the table of contents. However the original style information is retained, so when the text is unhidden, individual paragraphs do not need to be restyled.*

3. *Change the style to "Hidden". This does cause the document to renumber properly, (because the paragraphs are no longer numbered paragraphs), but all the original style information is gone, so if it is unhidden later, then all the styles of all the unhidden paragraphs will have to be restored manually.*

4. *Move the text, say to the end of the document, and then do not print or distribute the material at the end of the document. If this is all that is done, then this material will continue to appear in the table of contents. However if the font is also changed to "hidden", then the material will not appear in the TOC, but all the original style information will be retained. The drawback to moving the text is that now you need to keep track of where the information was moved from, in case you ever want to move it back.*

Hidden text can be made visible by selecting the backwards "P" paragraph mark on the "Home" tab.

Table of Contents

The table of contents lists the sections of the document and the page upon which each section starts. The table of contents may or may not include subsections, etc.

Microsoft Word (and many similar programs) has the ability to generate a table of contents automatically from section headings, and to update it when the document changes. The table of contents included in this template is automatically generated by MS Word, and can be updated by selecting the table and clicking on the menu that appears above the table at that time.

Note: Remove all instructional materials before finalizing and submitting this document, including this entire page and the one before it.

Table of Contents

List of Figures

(The title above is formatted as Heading 3, so that it appears in the table of contents, but was then modified to be centered and include a page break before the paragraph. Likewise for the List of Tables heading on the next page..) **Note: Remove this instructional paragraph.**

If a document contains a large number of figures, then it is appropriate to include a list of figures at the beginning of the document, following the table of contents. Each figure should include a title, and be numbered in a consistent logical fashion. The following list of figures was automatically generated from figure captions (see **Error! Reference source not found.** *on page* **Error! Bookmark not defined.** *), and can be automatically updated by right-clicking on the table below and selecting "Update Field". This feature is located in the "Captions" section of the "References" tab in MS Word.* **Note: Remove this instructional paragraph.**

On a related note, the references in the paragraph above, "(see **Error! Reference source not found.** *on page* **Error! Bookmark not defined.** *)" include cross-references to the Figure and page number that will adjust automatically when other Figures or pages are added or removed. This is done with the "cross-reference" button in the "Captions" section of the "References" tab in MS Word.* **Note: Remove this instructional paragraph.**

List of Tables

I   Project Description

1   Project Overview

Your text goes here . . .

2   Project Domain

Your text goes here . . .

3   Relationship to Other Documents

Your text goes here . . .

4   Naming Conventions and Definitions

4a Definitions of Key Terms

All Terms, Including Acronyms and Abbreviations, Used in the Project must be defined at some point. List the most important ones here, and refer the reader to the glossary on page 17 for a complete list. (Note: that page number is a cross-reference, and will automatically be updated whenever the glossary moves.)

Content

A glossary containing the meanings of all names, acronyms, and abbreviations used within the requirements specification. Select names carefully to avoid giving a different, unintended meaning.

This glossary reflects the terminology in current use within the work area. You might also build on the standard names used within your industry.

For each term, write a succinct definition. The appropriate stakeholders must agree on this definition.

Avoid abbreviations, as they introduce ambiguity, require additional translations, and could potentially lead to misinterpretation in the mind of anyone who is trying to understand your requirements. Ask your requirements analysts to replace all abbreviations with the correct term. This is easily done with word processors.

Acronyms are acceptable if they are completely explained by a definition.

Motivation

Names are very important. They invoke meanings that, if carefully defined, can save hours of explanations. Attention to names at this stage of the project helps to highlight misunderstandings.

The glossary produced during requirements is used and extended throughout the project.

Examples

Truck: A vehicle used for spreading de-icing material on roads. "Truck" is not used to refer to goods-carrying vehicles.

BIS: Business Intelligence Service. The department run by Steven Peters to supply business intelligence for the rest of the organization.

Considerations

Make use of existing references and data dictionaries. Obviously, it is best to avoid renaming existing items unless they are so ambiguous that they cause confusion.

From the beginning of the project, emphasize the need to avoid homonyms and synonyms. Explain how they increase the cost of the project.

Your text goes here . . .

4b UML and Other Notation Used in This Document

*SV: Define **symbols**, **diagrams**, and other **notations** used. May refer to a standard reference, such as "UML Distilled" by Fowler. (Include in bibliography.)*

Content

This section should describe the specific meaning of any symbols, punctuation, subscripts, superscripts, etc. used commonly throughout the document. If following published or common standards, then it is acceptable to reference those standards, and list any exceptions.

Motivation

If the distinction between a hollow arrow and a solid arrow is significant, for example, then everyone must know exactly what the distinctions and meanings are.

Considerations

If a particular notation is only used in one place, say on a single diagram or in a single section, then it may be more appropriate to document it in that specific location.

Example

This document generally follows the Version 2.0 OMG UML standard, as described by Fowler in [4]. Any exceptions are noted where used.

Your text goes here . . .

4c Data Dictionary for Any Included Models

*SV: Define **data structures** and **data properties** relative to this project, such as the contents of an employee record or the fact that student GPA ranges from 0.0 to 4.0 corresponding to letter grades of F to A. Data file formats may be referenced to documented standards, such as jpg or pdf.*

Content

Dictionary definitions of all information flows and stores used in models. Particular consideration should be given to defining the data attributes of all flows shown the context models (see sections 7 and 8).

This section should also contain any technical specifications for interfaces shown on the context models.

Your text goes here . . .

II Project Deliverables

SV: This portion of the report documents what your group has produced this semester.

Your text goes here . . .

5 First Release

SV: Document the date of the first release and the functionality of the system as of that point. UML diagrams and/or screenshots may be appropriate.

Your text goes here . . .

6 Second Release

SV: Document the date of the second release and the functionality of the system as of that point. UML diagrams and/or screenshots may be appropriate.

Your text goes here . . .

7 Comparison with Original Project Design Document

SV: Document how the prototype produced compares with the full project described by the previous group. Don't forget to reference their work properly.

Your text goes here . . .

III Testing

8   Items to be Tested

9   Test Specifications

ID# - Name

Description: Your description here . . .

Items covered by this test: Your list here . . .

Requirements addressed by this test: Your list here . . .

Environmental needs: Your list here . . .

Intercase Dependencies: Your list here . . .

Test Procedures: Your list here . . .

Input Specification: Your list here . . .

Output Specifications: *The output results expected from running this test. Depending on the specific test case(s), this may take the form of specific values, a description, (e.g. "the positive square root of the input value provided"), a table, or the name of a data file containing the expected results for comparison purposes (e.g. diff.)* Your list here . . .

Note: In some cases it may be appropriate to combine input and output specifications into a single combined table, with rows for different test cases.

Pass/Fail Criteria: *A.k.a. acceptance criteria, this documents what it means to "pass" the test.* Your criteria here . . .

10 Test Results

SV: Document here the result of running each test. Include the items addressed by each test, the time(s) and date(s) the tests were run, who ran the tests, the success or failure status of the test, and any faults identified as a result of running the tests.

ID# - Name

Date(s) of Execution: *Provide times also only if relevant, i.e. if the test(s) were run multiple times on the same date with different results.* Your data here . . .

Staff conducting tests: *Who conducted the test(s)?* Your list here . . .

Expected Results: Your list here . . .

Actual Results: Your list here . . .

Test Status: *Generally "Pass" or "Fail" Add explanatory notes if appropriate.* Your status here . . .

11 Regression Testing

SV: Document any tests that are repeated, whether they passed or failed the initial tests. (This section would particularly apply to older tests that must be repeated as a result of running the current tests, or to document the conditions under which it will be necessary to re-run these tests in the future. As such it may not apply to CS 440.)

IV Inspection

SV: This portion of the report documents the inspection procedures applied and the results obtained. For CS 440 each student is to contribute a significant piece of code to be inspected by the remainder of the group. So for example in a group of 4 students, each submits a piece of code to be inspected by the other 3 students, and each student inspects 3 pieces of code provided by his/her 3 teammates.

12 Items to be Inspected

SV: Document here the items to be inspected. Subsections may be needed. Note: These items may be, but do not have to be, the same as in section III8 above.

13 Inspection Procedures

SV: Include documentation of any checklists used, which may be included in an appendix or as an attachment. If using a checklist that was created elsewhere, be sure to include proper references, here and in the bibliography. Other information to be included here include how many meetings are held as part of the process and what portion of the work was done at meetings as opposed to outside of meetings. Were the results discussed in person or through some other means (e.g. electronically.)

14 Inspection Results

SV: For each inspection that was performed, indicate what was inspected, who did the inspection, the time and date when the inspection was performed and what was discovered as a result of the inspection(s). Note in particular any flaws that were revealed, and the resolution of them, as well as whether any re-inspections occurred.

V   Reccomendations and Conclusions

SV: Indicate whether or not the items covered have passed their testing and inspection process or not, and what actions should be taken next. (E.g. further testing & inspection, or implementation.)

VI Project Issues

These sections were copied from the development project template, and may or may not apply to the coding project. However do please complete the project retrospective in any case.

15 Open Issues

SV: Issues that have been raised and do not yet have a conclusion.

Content

A statement of factors that are uncertain and might make significant difference to the product.

Motivation

To bring uncertainty out in the open and provide objective input to risk analysis.

Our investigation into whether the new version of the processor will be suitable for our application is not yet complete.

The government is planning to change the rules about who is responsible for gritting the motorways, but we do not know what those changes might be.

Considerations

Are there any issues that have come up from the requirements gathering that have not yet been resolved? Have you heard of any changes that might occur in the other organizations or systems on your context diagram? Are there any legislative changes that might affect your system? Are there any rumors about your hardware or software suppliers that might have an impact?

Your text goes here . . .

16 Waiting Room

SV: This is a place to record ideas or wishes that will not be included in the current release of the product, but which might be worth reconsidering at a later date.

Requirements that will not be part of the next release. These requirements might be included in future releases of the product.

Content

Any type of requirement.

Motivation

To allow requirements to be gathered, even though they cannot be part of the current development. To ensure that good ideas are not lost.

Considerations

The requirements-gathering process often throws up requirements that are beyond the sophistication of, or time allowed for, the current release of the product. This section holds these requirements in waiting. The intention is to avoid stifling the creativity of your users and clients, by using a repository to retain future requirements. You are also managing expectations by making it clear that you take these requirements seriously, although they will not be part of the agreed-upon product.

Many people use the waiting room as a way of planning future versions of the product. Each requirement in the waiting room is tagged with its intended version number. As a requirement progresses closer to implementation, then you can spend more time on it and add details such as the cost and benefit attached to that requirement.

Your text goes here . . .

17 Ideas for Solutions

Your text goes here . . .

18 Project Retrospective

At the end of every project you should reflect upon what methods were used that worked out well and should be repeated in the future, and also what methods did not work out well and should be avoided. Any recommendations, suggestions, or ideas for how to do things better in the future should also be documented

Motivation

To learn from experience, and to continually strive for process improvement.

Considerations

When things don't go well, it is important to distinguish whether the methods themselves were poor, or simply poorly implemented in this particular case, or whether they just weren't right for this particular project / group of engineers.

Your text goes here . . .

VII   Glossary

SV: The glossary is a more complete and inclusive dictionary of defined terms than that found in section I.7.a, the latter of which only covered the most important key terms needed to understand the report.

The glossary defines terms that may not be familiar to all readers. This is especially important if the document is expected to reach a wide and varied audience, such as school children. The glossary may be placed at either the beginning or the end of the document.

Flotsam: *Any part of a ship or its cargo found floating on the water, whether it was deliberately or accidentally lost by its original owners.*

Jetsam: *Any part of a ship or its cargo that is deliberately cast off (jettisoned) by its original owners, generally in order to lighten the ship, whether it floats or sinks.*

Your text goes here . . .

VIII   References / Bibliography

This section describes the documents and other sources from which information was gathered. This sample bibliography was generated using the "Insert Citation" and "Bibliography" buttons in the "Citations & Bibliography" section under the "References" tab of MS Word. Creating new citations will not update this list unless you click on it and select "Update Field". You may need to reset the style for this paragraph to "normal" after updating.

DO NOT NEGLECT TO REFERENCE THE PREVIOUS GROUP'S REPORT ! ! !

[1] Robertson and Robertson, Mastering the Requirements Process.

[2] A. Silberschatz, P. B. Galvin and G. Gagne, Operating System Concepts, Ninth ed., Wiley, 2013.

[3] J. Bell, "Underwater Archaeological Survey Report Template: A Sample Document for Generating Consistent Professional Reports," Underwater Archaeological Society of Chicago, Chicago, 2012.

[4] M. Fowler, UML Distilled, Third Edition, Boston: Pearson Education, 2004.

IX Index

This section provides an index to the report. The sample below was generated using the "Mark Entry" and "Insert Index" items from the "Index" section on the "References" tab, and can be automatically updated by right clicking on the table below and selecting "Update Field". To remove marked entries from the document, toggle the display of hidden paragraph marks (the paragraph button on the "Home" tab), and remove the tags shown with XE in { curly braces. }

No index entries found.