

**COMP 3520 / 4530 – Software Engineering**

Assignment #1: Software Process Model

## Due Date: Beginning of your Seminar on January 23rd, 2018

**Background information**:

# Accessing the Quality of an Information Source

While the material in this course is current, an ever expanding source of information is available to you online. **When competing assignments in this course it is expected that you go beyond the text book to find additional sources of information on the topics being discussed**.

To that end you are expected to find additional sources to support the decisions you are making in the assignments. As we see in assignment 1 you are asked to define and document a software life cycle mode for a start-up company. This question really requires you to define a business opportunity and define how you would structure your development environment to take advantage of it. You are required to find additional sources to define a business opportunity and provide supporting evidence as to why the selected development model is appropriate. This requires a critical analysis of the different models in both strengths and weaknesses and how you will employ the model in you start up business.

When looking at a source of information, **a critical analysis of the credibility of the material must also be performed**. We can find all kinds of points of view published online, but the question to be asked is are they from a credible source, to that end the following analysis of a source should be applied.

## Evaluating Your Sources

**For each source think about the following questions in order to access its credibility.**

1. What is the source? Is it a book (or chapter from a book), encyclopedia entry, government document, periodical article (what kind of periodical?), website, (What kind of website? .co, .com, edu, org, .gov, *etc) etc*?
2. What kind of “article” or “website” is the source? Is it a brief commentary, book review, letter, news item, an overview/summary, or research article, *etc*, *etc.*? Provide evidence.
3. Who are/is the writer(s) of the resources(s)? What are the writer’s credentials? (Not listed? Why not?)
4. With which institution/organization (an academic institution, a company etc.) are/is the writer(s) affiliated?
5. Who or What is overall body/organization/publisher responsible for the resource?
6. For who are/is the source(s) intended? (general public, professionals, professors, university students, *etc.*?)
7. What are/is the main purpose of the source(s)? To further academic discussion, to provide background information, for commercial purposes, *etc*,?
8. How thorough is the discussion of the topic you are studying? How many pages? (Provide evidence)
9. What is the process to produce this source? How much research, time, editing, etc. is involved?
10. Are there bibliographic references that the writer/organization used to write the source? How extensive are the references? Are there suggested further readings that the writer/organization included? How extensive?

## Citing Your Sources

**List** **each source in a consistent bibliographic citation / reference style or format.**

Author(s) family name, first name initial(s). Year. Title of article/chapter, conference presentation, etc. Title of Book or Conference or Journal (with Volume #), page #s.

## Searching for Resources

While a Google search will provide a plethora of websites and articles to choose from, consider refining your search by using a digital library. Here are some examples that you are encouraged to explore:

1. IEEE Explore Digital Library: <http://ieeexplore.ieee.org/Xplore/home.jsp>
2. IEEE Spectrum Magazine: <http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6>

## Marking Criteria

A generic marking rubric is applied to all assignments, specific marking rubrics are then presented for each individual assignment.

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| --- | --- | --- | --- |
| **Criteria** | **Target** | **Acceptable** | **Unacceptable** |
| **Organization** | **Formal report** is well organized, including cover page, table of contents, executive summary, body, conclusion and bibliography with references. | **Formal report** is organized, but missing well-constructed elements (cover page, table of contents, executive summary, body, conclusion and bibliography with references). | The report appears to be disorganized. Little evidence of elements, such as cover page, table of contents, executive summary, body, conclusion and bibliography with references. |
| **Mechanics** | No grammatical, spelling, or punctuation errors. | A few grammatical, spelling, or punctuation errors. | Many grammatical, spelling, or punctuation errors. |
| **Critical Thinking** | Evidence of critical examination and thoughts presented are reflective and insightful. | Some evidence of critical examination and application of the different approached to software development, although comments are repetitive of those presented in journal articles. | No evidence of critical thought or application of the materials. |
| **Examination of Concepts** | Is able to make inferences and comprehends deeper meaning consistently, demonstrating insight and the relevance to what really happens in software development. | Comprehends the surface level meaning and begins to relate issues to those presented in the course/readings, and has some ability to apply the concepts. | Is not comprehending or reflecting upon what is read. Not able to apply the concepts. |

## Assignment 1: Software Process Model

**Topics Covered:**

* Software processes (Ch. 2)
* Agile software development (Ch. 3)

**Introduction:**

This first assignment will focus on the topics of software processes and agile software development. You will be applying the concepts learned from the first two lessons to a fictional start-up company, demonstrating your understanding of software process and agile software development. For this assignment you will develop an idea for a start-up business, and you will define and document the software life cycle mode your start-up will employ.

**Problem:**

Assume you and another member of the class are starting up a small company using investor capital and your own money. You are planning an IT based start-up company that produces software.

For your company, describe which development process model you would use. You can use the models as described in the book, from another source, or alternatively define your own process. Detail out the specific pieces of the process model you will follow. Describe why and how you picked this model. Outline the strengths and weaknesses, and how it would work for your business and you personally.

**Report:**

Create a formal report, including a cover page, table of contents, executive summary, body, conclusion and bibliography with references. Include page numbers, and figure references, etc. The body of this report should be 4-8 pages in length.

**You will be working on this start up throughout the course, so put some real thought into it.**

**Key Question:**

* Does your project look like a reasonable business opportunity that requires the application of a software process model?

### Marking Rubric

This assignment requires you to demonstrate knowledge of several different software life cycle modes and present materials on which approach to software development you will take. The following grading rubric will be applied:

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Requirements** | **Mark** |
| **Startup Business 30%** | The project looks like a reasonable business opportunity that requires the application of a software process model.  (1-2 pages) | **/30** |
| **Development Model 40%** | A through development approach has been defined with supporting evidence for why this is a good software process for this business, with this team of individuals.   * The process is defined. (1-2 pages) * Rationale for why and how you picked this model, outlining the strengths and weaknesses, and how it would work for your business, your team, and you personally. (1-2 pages) * Application of the different approached to software development. (1 page) | **/40** |
| **Report Format**  **30%** | Quality of the written report.   * Includes cover page, table of contents, executive summary, body, conclusion and bibliography with references. * Includes page numbers, and figure references, etc. | **/30** |
| **Total /100** | | |