Department of Computer Science

CSCC40F - Information Systems Analysis and Design

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Assignment 1: Preparing a Feasibility Study

Due Date: 11:59PM, Oct 15, 2010

This assignment counts for 10% of your final mark

You are expected to prepare a feasibility study for an information system project of your own choice, to be carried out within an existing organization. This project is meant to give you exposure to basic concepts discussed in the course, but also to encourage you to "look around" for the type of work you may be doing in a few years as a computer science professional.

The project is to be carried out by teams of four.

I. Doing the Assignment

This assignment has ten steps. They are:

1. Identify a problem within an existing organization that is amenable to ***information systems*** analysis techniques.
2. Scope the problem, i.e., choose how small or large a problem you will tackle during your feasibility study.
3. Interview key people involved in the problem. These may include your contacts, others with responsibilities related to the feasibility study.
4. Study relevant documents. This may involve reading policy documents, memos, documentation on current systems and new objectives/needs.
5. Define alternatives for conducting business and for automation. Define the criteria you will use to evaluate and choose among these alternatives. Your criteria should include cost/benefit, where applicable.

6. Conduct an assessment of unusual circumstances or special attention items. This may involve special requirements for particular employees or customers of the organization.
7. Conduct an evaluation of the alternatives and choose the one that looks most promising.
8. Use goal diagrams to model business objectives and the alternatives you have identified; use state and class diagrams to model business processes for the alternative you have selected, along with relevant concepts.
9. Write a report that describes the objectives of your study, the problem you identified the alternatives you explored, as well as your recommendations. Make sure to include your goal, state and class diagrams in the report or in appendices (or both);
10. Document your team's work and complete a team report (see attached form).

II. What to Hand In

Submit your assignment electronically by visiting the electronic submission system at http://portal.utoronto.ca/. If you have hardcopy material that needs to be handed in, please submit it directly to your tutor (including interview DVD recording, business forms, etc…). The assignment you hand in should consist of a report on the feasibility study that was conducted. Assume that the report is being prepared for management. This means that you need to be clear and concise about your recommendations and that you should present the basic ideas and recommendations in the report simply and with no extraneous information. Other relevant information and supporting evidence is to appear in appendices. Keep in mind that busy managers don't have the time to read long reports. Your write-up should include information on the following items:

1. An introduction describing the organization you chose to study, the problem you identified and the process you followed during your study.
2. The basic alternatives you considered and the criteria you used to evaluate them.
3. A recommendation to proceed or not to proceed with an information system development project, with supporting arguments.
4. A conclusions section that summarizes the contents of your report and reiterates your recommendation.

5. One or more appendices which describe in more detail (i) the organization for which the study was conducted, (ii) the process used to gather information (interviews, review of written material, etc.), (iii) the names and phone numbers of people you talked to, details of any analyses you conducted, (iv) goal, class and state diagrams that describe in more detail the alternatives you considered and the alternative you are recommending.

III. Suggestions

Finding a Problem

Finding an organization that is willing to provide you with a problem is easier than you think. Of course, someone in that organization will have to spend some time talking to you and giving you information. But then remember that many class projects from this very course actually were adopted by the "customer" organization and were turned into real software development projects!

There are several things you may want to try here. Start by considering previous employers, but also friends, relatives, acquaintances, who may be in a position to give you access to an organization that is willing to have you study one of their systems and prepare a feasibility study for an information system project. Ideally, the organization you find will be large with many departments etc. and you will be dealing with a few people in one department. Failing this, you may want to try a small business (e.g., a retail store, a professional office...).

Other possibilities for feasibility study projects include an information system for public software (e.g., a help facility for Windows or UNIX), a public service that you are knowledgeable of, e.g., driver license registration, or one for which there is publicly available information, e.g., OHIP-related information systems. Or, a web service for X (e.g., courseware, travel information, sports news…).

In approaching an organization, you should always talk to someone who has the authority to decide to assist you. Remember that this project should be mutually beneficial -- and make sure

you tell your ``customer" this. In fact, you should offer to present a copy of your final report to your customer -- and make sure it is delivered.

What kind of project should you choose? Ideally, the organizational information system you study will have several people involved and possibly could include an existing computerized information system. The following are examples of typical projects:

- Computerize a given business system (e.g., inventory, sales).
- Computerize a firm (usually small), which had not been computerized before.
- Evaluate an existing computerized business system and recommending changes and modifications or even a new system.

Try not to bite off more than you can chew (***remember, this is a course project***). You may find fairly early on that the project you have chosen is too large. In this case, perhaps a subsystem of the original problem can be chosen. This should be done in consultation with your instructor or tutor.

Starting the Project

Be sure to mention to the people you contact that you will need to conduct interviews with the organization's staff, including the manager you are speaking with. The interviews should be short.

Try to collect some basic background information on the organization, its industry, the system you want to study; the library is a wonderful place to start.

Prepare a timetable of interviews/contacts so that your customer knows what to expect and when to expect it. You will need to plan this schedule with your own time commitments, exams, and so on in mind. Once you offer the schedule, you will gain a lot more respect and assistance if you stick to it.

The Interviews

Always plan your interviews:

- Make sure you know what you want to learn;
- Prepare a list of questions before you go;
- Keep each interview short; your contact's time is valuable, so don't waste it....or your own;
- Sometimes a portable tape recorder can be used to record the discussion -- you should always ask permission before using one;
- Write down the answers to your questions and any notes or observations as soon as possible after the interview; Human memories are amazingly poor.

Your first interview should go over background information, probably with your principal contact. At that meeting, try to achieve the following:

- Get a good overview of the system to be studied -- purpose, perceived problems, plans for changes, major perceived benefits, and a description of its structure;
- Identify the key transactions; get volumes where possible;
- Get copies of any forms or reports used (sketches will do).

Watch out for your style of questioning. Don't scare your customer -- don't use buzzwords you learned in class (e.g., “data flow diagrams") unless you are sure your customer knows what they mean. You are often better off to play stupid ("Gee, I don't quite see how that works") than to show off how much you know. Remember, your customer knows her business best, not you.

Troubles

If you have any difficulty obtaining the information you need from your customer:

- Communicate with your tutor or the instructor; they may be able to help with advice.
- Try a few *short* question phone calls with your contact person(s).
- Drop off a short questionnaire for pick up later in the week.

IV. Marking Scheme

Your assignment will be marked by your tutor. If you have questions about a marked assignment, you should first ask your tutor before/after a tutorial. If you don't get satisfactory answers, you should talk to your instructor. Marks for this assignment will depend on the following factors:

- **Problem identification** (20%): How well have you researched the problem, and the organization you are dealing with by talking to people, reading documents, etc. How hard is your problem (e.g., studying an existing system for a large organization is harder than studying the possibility of a new system for a small store).

- **Alternatives and criteria** (15%): Have you considered obvious alternatives? …interesting ones? How well defined are your criteria and how thorough is your evaluation? Are your recommendations backed by appropriate evidence? Are they reasonable?

- **Supporting evidence** (15%): The supporting evidence you include in terms of figures, tables, cost/benefit analysis etc. Organization of appendices; Usefulness of supporting information; How well does the evidence support the recommendations?

- **Diagrams** (30%): How complete and accurate are your diagrams describing the alternative you are recommending?

- **Presentation** (20%): The style of your presentation, including language, and clarity 10% - Language and 10% - Style and clarity

Your assignment should include a cover page indicating your ***name, title of work, course, date, instructor and tutor names***. Make sure that drawings are clear and legible. Keep in mind that you will be judged on visual appearance, in addition to grammatical correctness and quality of writing. The text must be well-structured, with paragraphs, full sentences and all the other features of a well-written presentation. Your report must ***not*** consist of itemized lists of points. Text font size should be either 10 or 12 points.

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Assignment 1: Team Report Form (*must* be submitted with assignment)

MARKS WILL BE ADJUSTED IF THE TEAM EFFORT IS NOT DISTRIBUTED EQUALLY.

Description of roles and contributions of each team member:

Name	**% of team Effort**