

MATH 3012G: GROUP PROJECT ASSIGNMENT

SPRING 2010

1. PROJECT STATEMENT

For this project, you will work with your assigned groups of four (or three) students. (In the event that a group's membership drops below three, I will rearrange some groups to ensure every group has at least three members.) Your task is to identify a real-world problem related to the discipline of a member of your group. (This can be construed fairly broadly.) You will then propose a way in which structures or techniques (e.g., algorithms) from this course can be used to solve the problem. **You are not expected to submit a full solution to the problem!** Instead, you are to create a proposal which a client would use to determine whether your group would be hired to help the client solve the problem. Your proposal will consist of a written component and a virtual presentation. The client could be any of a variety of entities such as a corporation, an educational institution, a non-profit, a non-governmental organization, or a government agency.

The written component of your proposal is not officially constrained in terms of length. However, a proposal that is less than five pages in length is unlikely to receive full credit. The design and formatting of your proposal is at your discretion. (Remember, you are trying to get a prospective client to hire you!) The only constraint is that you must be able to submit the written component of your proposal as a PDF file. (More on this later in the document.)

Your written proposal will be evaluated on

- demonstration of full understanding of the difficulty of the problem;
- demonstration of competence to solve the problem;
- appropriateness of the proposed approach to solving the problem; and
- clarity and professionalism of presentation (grammar, spelling, etc. are a component of this category).

In an ideal world, we would have in-class presentations of proposals. However, the enrollment in this section is too large for that. In lieu of in-class presentations, we will have virtual presentations. These will take the form of videos submitted to YouTube. (You are free to make your video private if you don't want it shared with the world. However, you must place the account mitchkeller on a list that has access to it in that case.) Your video should be 5–10 minutes in length. (The maximum length of a YouTube video is 10 minutes.) You are not expected to produce a high-budget blockbuster for this. In fact, a simple video of your group members speaking in front of a camera or an audio recording to narrate PowerPoint slides is acceptable. However, the sky is the limit if you have the time, skills, and desire to produce something more polished. I will help you find resources to record, etc. if needed. The Georgia Tech Library has many resources in this area that you may want to consider.

Your virtual presentation will be evaluated on

- evidence of competence to solve the problem;
- clear communication of your proposed approach to the problem at a level appropriate for the audience; and
- likelihood that your client would hire your group to solve the problem based on your presentation.

The group project overall counts as 15% of your course grade. A final score between 0 and 5 will be assigned by weighting the criteria above. Additionally, your level of involvement in your group's proposal will be worth 20% of your group project grade. (This means that different members of a group may receive different grades on the project.) I will determine the involvement component based on your own assessment of your work on the project as well as your group members' assessments.

A detailed rubric (similar to the one provided for Writing Assignment 2) will be provided no later than 8 March 2010.

2. DEADLINES AND SUBMISSION INSTRUCTIONS

- No later than 1700 on Monday, 15 March 2010, your group must identify your client and a problem to solve for that client. You must upload a PDF file called **client_problem_info.pdf** to your group's folder on T-Square by this time containing (1) the name/identity of the client and (2) a *brief* description of the problem to solve. Failure to meet this deadline will result in a reduction of 0.5 points (one half of a letter grade) on your overall project grade. In the event that I deem any client or problem unsuitable based on this submission, I will contact the group and help you identify an alternate client and/or problem.
- No later than 2359 on Friday, 9 April 2010, your group must submit a draft of your proposal. To do this, create a folder called **Group Project DRAFT** in your group's folder on T-Square. Your proposal must be a PDF document uploaded into this folder. If you feel supporting documents are appropriate, you may include them in other formats. **Be sure to contact me to verify that I will be able to open the document before doing so.**
- You will receive feedback from me (uploaded to T-Square) no later than 1200 on Monday, 12 April 2010. This feedback will discuss any concerns I have about your proposal or areas for improvement. If you want specific feedback on any aspect of your proposal, please include a plain text file in your draft folder called **request for feedback.txt** that contains specific questions you want me to answer.
- No later than 2359 on Monday, 19 April 2010, your group must submit your final proposal. To do this, create a folder called **Group Project FINAL** in your group's folder on T-Square. Your proposal must be a PDF document uploaded into this folder. If you feel supporting documents are appropriate, you may include them in other formats. **Be sure to contact me to verify that I will be able to open the document before doing so.**
- No later than 2359 on Wednesday, 28 April 2010, your group must upload your virtual presentation to YouTube. One group member must add a link to the video to your Group Project FINAL folder on T-Square once the video is uploaded. **I strongly suggest that you prepare a brief test video to upload well in advance of this deadline. As in the real world, extensions because of failure to prepare are unlikely to be granted.** Remember that while I hope you will make your video public and share it with your classmates, this is not a requirement. However, if you make the video private, you must grant access to the video to the YouTube account mitchkeller.
- After the deadline for posting your virtual presentation has passed, a brief T-Square survey will be opened for you to evaluate your contribution and your group members' contributions to the project. This must be completed by 2359 on Monday, 3 May 2010.