

Your assignment is to write a proposal for a final project. Your idea for a project might be rather short, but the proposal should contain some information that fleshes out the basic idea. Originally, I thought that you should write 2 pages about this, but it occurs to me that the precise length of the proposal might depend on the topic. The main purpose of writing this proposal is to have you formulate a good plan for the project. That is usually a good step towards actually doing it. Note that you are not completely wedded to the project. If something else strikes your fancy in the next few weeks, you could work on that.

It would be good to include the following information in the proposal.

- What is the basic idea of the proposal? For instance: I propose to compute the first 100 digits of  $\pi$  using an abacus.
- Why are you interested in this topic? For instance: I have always been fascinated by the digits of  $\pi$ , and also with the mathematical methods of ancient cultures. This project combines my two interests.
- How do you plan to accomplish this project? For instance: I'm going to build an abacus out of wires and glass beads, using a soldering gun to put the whole contraption together. Then I'm going to sit in my room for a month or so and work with the thing. Friends will slip food in under the door for me. The calculation is feasible because I can use Machin's formula to get about 3 digits a day. Of course the ancients didn't know Machin's formula...
- What would your final presentation be like? For instance: I will bring in my abacus and pass it around the room. Then I will demonstrate how to do the basic arithmetic operations on an abacus. Finally, I will compute enough of the digits of  $\pi$  so that the audience could imagine that someone with a month to kill and friends to cook their food and do their laundry could actually do the calculation.
- What do you hope to learn from the project? For instance: I've always wanted to build something with a soldering gun, and this would give me practice.