

AI2 - PROJECT HANDOUT

1985/86

John Hallam
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Each student taking the full course AI2 must complete a project. A project usually consists of a program exploring and/or illustrating some area of the course, together with a written report describing the program. Help and supervision will be provided tutors, lecturers and demonstrators. Prolog (NIP) on the Gould (itspna) will be used for the project. The project counts for 30% of the marks for the course. It must be handed in by 1pm on Tuesday 28th April to Francesca Sini in the secretary's office, E2 South Bridge. (No extensions!) Your DP is dependent on the submission of your project report, which must be type-written, clearly presented, well structured and correctly spelled.

In some cases, projects are based on existing programs, ensuring that you do not spend a large amount of your time writing code from scratch. A number of pre-specified projects are provided for you to select from. If you have some other project that you are burning to do then you will have to consult me about it: you will need to provide me with a project proposal, in the same form as those pre-specified.

The project proposals consist of:

a. A reference to an existing or proposed program illustrating some aspect of AI e.g. a particular technique or a toy version of a larger program.

b. References to the relevant literature.

c. A set of specific questions or tasks, relating to the program. You will be expected to answer these questions/ carry out these tasks to qualify for a minimum pass. (It may count for more than this in some cases).

d. A further number (2/3+) of proposals for interesting and reasonable extensions/modifications to the program. These proposals are open-ended, allowing you to be a little more adventurous. You should follow up at least one of these proposals. The more specific tasks should provide the groundwork for this.

A project should take up at least 40 hours of your time, including writing up.

You must present a short talk related to your project to the rest of the class during the third term. A small set of topics will be recommended for each of the projects (so that people who do the same project need not do the same presentation); however, if you have a project-related topic you wish to talk about then you may suggest it as the subject of your presentation. The presentation is compulsory, but NOT assessable.

Also enclosed with this handout is a guide to writing up your project. PLEASE USE IT. Good examples of past project reports can be found in Forrest Hill library. Remember that in order to obtain your DP the report must be well presented. If you have questions about the structure or content of your report, ask your tutor or consult the examples in the library.

Timetable for AI2 projects.

1. By the week 4 tutorial, second term (4-6 Feb 1987) - students choose projects and inform their tutors of their choice. Any students not doing pre-

specified projects should submit an alternative proposal by this time.

2. By end of week 7 - all students should provide their tutor with a three page summary (approx.) of progress to date, and indicate which aspect of the project they are developing further.

3. By the Friday of week 9 of the second term, students choose their presentation topic and inform their tutors. Students suggesting presentation topics of their own should submit their proposals, in the same form as those supplied, by this time.

3. By 1pm Tuesday of week 2 of the third term (28.4.86) - projects must be written up and handed in at South Bridge. You must submit TWO COPIES of both text and listings (see "Project Reports" below for details).

4. Week 3, 3rd term - project presentations in class begin.

Project supervision.

Day to day project supervision will be the responsibility of tutors and demonstrators -- project problems or questions should be addressed to them in the first instance. They may refer you to the project supervisor if they cannot answer your question.

Two supervisory meetings will be arranged for each project. The first, in week 2 or 3, will be an introductory meeting to help students choose their project and get started; the second, in week 7 or 8, will be a halfway meeting to enable students air any problems which have arisen in the course of project work so far.

Practical sessions.

The practical sessions that started last term will continue throughout this term: their purpose will be to serve as debugging and consultancy sessions for your project, as well as for other practical exercises set. Tutors will keep a check on your progress. If you have queries about specific projects that demonstrators cannot deal with then contact the project supervisor (usually the person who set the project) or the lecturer teaching the relevant course.

Difficulties with Projects.

If you have problems which may affect the completion of your project, contact your tutor or demonstrator as soon as possible. Tutors and demonstrators please keep me informed of potential difficulties. If you are unable to work on your project because of illness, contact your director of studies and the AI2 course organiser (John Hallam) as soon as possible so that medical certificates can be arranged. This will enable the examiners to assess appropriately the work that you manage to complete.

AI2 PROJECT REPORTS

HOW TO WRITE THEM

Alan Bundy/Helen Pain/John Hallam
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Your AI2 project carries 30% of the marks for the course. Although it involves writing a program and giving an oral presentation, it will be assessed, mainly, by the written project report. This note is to guide you in the writing of your report.

Your report must cover the following points:

Motivation: Why is this project worth doing? What research issues does it address? What applications might it find? (Note that 'motivation' does not mean "why did you choose this project?", but rather "what makes the project interesting to the reader of the report?").

Description: What does your program actually do, and how does it do it? The actual code and some sample runs should be given in an appendix, (but they are not enough). You must describe the program, in English, possibly with the help of diagrams, in the main body of the report. You should both describe the mechanism abstractly and give one or more worked examples to illustrate how it works in practice. Give examples of its failures as well as its successes.

Related Work: Who else has done similar work, and how does your work relate to theirs? Is yours based on theirs and, if so, in what ways is yours more or less powerful. -

Further Work: What did you not do that you would have liked to? Why did you not do it? Lack of time, resources? Did not know how to? Make sure to separate what you did from what you wished you had done.

Program: Your computer program should be included as an appendix, together with logs of sample runs. Both should be well commented, so that they can be understood by the examiner. It helps if you arrange the code sensibly, e.g. in top down order and/or grouped according to function. Include instructions on how to run the program.

Conclusion: What did you learn? What should others learn from your work? Record both negative and positive lessons.

Summaries: Summarise your project in (a) the abstract, (b) the introduction, and (c) the final summary. (a) and (b) should not assume knowledge of the technical terms introduced in the report.

Title: The title is an even shorter summary. Make sure it is meaningful to someone who has not already read your report.

References: Any publications referred to or quoted from in the report must be listed at the end of the report, in a standard format. If you are unsure about the format to use, consult any journal and look and see how references are quoted in the text and in the references section of the papers. Quotations must be embedded in quote marks, "....".

Structure: Your report will be read by two examiners. Each examiner will have several similar reports to read in a short space of time. You will help them, and yourself, if your report is legible, grammatical, correctly spelled, well organised, and generally easy to read.

You should type your report (if this causes problems please consult the course organiser well before the submission date). Text editors, spelling correctors and text formatters are available on most computer systems. Check the spel-

ling. Ask a friend, or two, to read it through and give comments. Ask your tutor to read it. Leave plenty of time, between finishing the first draft and the project deadline, both for having the report read and for correcting it.

You must provide two complete copies of your project. In particular, you must provide two copies of any computer listings of your program or runs of your program, because these are difficult to photocopy. Your project should be on A4 paper and suitable for reproduction as a Departmental working paper.

The best AI2 projects, in each year, are turned into Departmental working papers and are available for inspection in the Forrest Hill library. Use them as a guide.