Analysis of Algorithms: Programming Projects

The projects involve implementation of basic algorithms in C or C++, and their application to image processing. The project descriptions, sample images, and other relevant materials will be available on the Web.

You may work alone, or in groups of two or three; your task does *not* depend on the group size, which means that forming a group of three reduces your workload. For each project, a group must submit one program and one written report, and all members of the group will get the same grade. You may discuss ideas and algorithms with other groups, but you cannot share your code.

We have a second teaching assistant, Michael Heath, who will grade your projects and help you with programming. His office is ENB 220, and his office hour is Thursday 2–3pm.

Submission

For each project, you should submit your source code and a short report describing your experience, and then give a demo of your program. Your submissions are due by 12:30pm on the due date; the penalty for late submissions is the same as for homeworks.

Source code
E-mail your code to Michael Heath, at `heath@suntan.eng.usf.edu,` by the submission deadline; this e-mail address is *only* for submitting code. The subject line should say "`Algs Project,`" specify the project number, and include the last names of the group members, in the alphabetical order:

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Algs Project 1:  Fink, Heath, Johnson
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You do *not* need to submit a print-out of your code; only an electronic submission is needed. Note that it is due by 12:30pm even if your machine or network is down. Try to finalize and e-mail your code in advance, to ensure that computer "emergencies" do not affect your grade.

Report
For each project, the instructor will post specific questions to be addressed in the report. A group needs to submit only one report, which should be *typed* and well organized.

Demonstration
You should schedule a fifteen-minute appointment with Michael Heath and give a demo of your working program, using his Unix machine in ENB 220. You may run your code on Michael's account or telnet to your own account. You may select one member of your group to give a demo, or come all together. Michael will put a sign-up sheet on the door of the instructor's office (ENB 312), and you should sign up for a specific time slot *by the submission deadline.*

Grading

The projects are graded on a 10-point scale. In addition, an exceptionally good project can earn 1 or 2 bonus points toward your final grade for the course. The grade consists of three parts:

Source code: 2 points
Existence of the code: 1 point.
Organization and readability: 1 point.

Report: 3 points
Results and their analysis: 2 points.
Organization and readability: 1 point.

Demonstration: 5 points
Existence of a running program: 1 point.
Performing the required tasks: 3 points.
Interface and ease of use: 1 point.