

Submitting Programming Assignments

- Submission:
 - Submit only the source code, not the executable
 - Programs will be submitted via email to phy277@mail.astro.sunysb.edu using the Un*x mail command (do not submit the program as an attachment)
 - Example (what you type is in blue, prompt is in black, output is in red):

```
>mail phy277@mail.astro.sunysb.edu
Subject: program # 1
~r position.f90
"position.f90" 20/415
.
Cc:
>
```
- Practice submitting by emailing program to yourself!
- If you have doubts see the instructor or course TA

Rules for ALL Programming Assignments

- Write the program yourself!
 - Assignments are not team efforts. All work must be done only by you alone.
 - Be prepared to verbally defend your work so that you can prove that it is yours!
 - Any instances in which plagiarism is suspected will be turned over to the academic judiciary
 - Protect your directory by issuing the command “`chmod og-rwx .`” in your home directory. This will prevent others from reading or copying your work. If you have any doubts about this step see the instructor or course TA
- All programs must contain the IMPLICIT NONE statement
 - Those that do not we receive a zero grade
- All programs must contains a block of comment statements in the beginning that explicitly states:
 - Your name
 - Programming assignment #
 - Purpose of the program
 - Date
 - Any other information that you think should be there (see examples in notes & textbook for inspiration!)

Programming Assignment #5

- Due 5:00PM 10/19/2007
- Problem 5.1: Write a program to calculate the value of the integral

$$\int_1^{10} \sin(8 \ln x) dx$$

using Simpson's rule. Include the value you obtained for this integral, along with an explanation of why you believe the value to be correct, in the comment statements in the header section of your code. Also describe, in the comments, how you verified that your code is working correctly.

- Problem 5.2: Write a program that uses Newton-Raphson iteration to find all roots of the function

$$f(x) = -3.142 + x + \sin(x)$$

Your program should prompt the user for an initial guess of a root. Note how many roots you found and their values in the comments in the header of your code. Also describe, in the comments, how you verified that your code was working correctly.