PHY 635 Many-body Quantum Mechanics of Degenerate Gases

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Assignments, numerics component:

Assignments may contain a component of numerical work. This is essential in modern science.

For numerics, I will provide almost ready code templates into which you have to just insert some small but essential contribution then run them, and analyse with tools I provide.

(1) Codes will be provided as an xmds script. Please visit www.xmds.org for a rough idea on what that is, you will not require detailed knowledge. For those interested however, please see xmds course on my webpage.
(2) To implement your "contribution", you need very minimal knowledge in C-coding, please see internet.
(3) Now at beginning of the semester, either install xmds2 on your own e.g. laptop, or check it out in the first 10 rows of computers in the computer pool in the library. It should be installed there. You also need matlab for result analysis.
(4) To compile and run your code in "CODENAME.xmds", please do the sequence:

xmds2 CODENAME.xmds
./CODENAME [the executable name is defined in the XMDS tag:
<simulation xmds-version="2">
<name>Assignment1_program_draft_partb_v1</name>
at the top of the script. For simplicity, always keep this the same as the filename]
xsil2graphics2 CODENAME.xsil

-now in the same directory in matlab:
CODENAME
-type "who" to see all loaded data variables.
-type NAME_OF_PLOTSCRIPT to execute NAME_OF_PLOTSCRIPT.m provided by me.

(5) For your hand-in of this part, please include a printout of the part of code modified by you (ONLY) and the plots I had asked you to make.
(6) Like with other pieces of assignment the policy will be full marks for **a good attempt**. However I invest a lot of time preparing the numerics part and would hence strongly encourage you to do it well.