

This is NOT a group project. While discussion with other students is encouraged, all work submitted for credit, however, must be your own. Any evidence of plagiarism or other forms of scholastic dishonesty will be grounds for a failing grade in the course.

Problem Statement

Ucin Sietz is a nuclear engineering student at Technische Universität Skudai and is conducting research with several radioactive isotopes. He would like to compare the amount remaining for each isotope after several periods. The amount of each isotope initially is 10 grams and the remaining amounts are to be determined after every 20 days for a year. The isotopes of concern are ^{137}Cs , ^{131}I , ^{60}Co , ^{90}Sr , and ^{220}Rn .

Your project is to help Ucin by coding a Fortran95 program that will calculate the quantities above. Employ the concept of arrays to store the information about the isotopes and also to store the results of the calculations. Use a spreadsheet (e.g. Excel) to import and plot the calculated results.

Refer to any nuclear engineering text for the relevant formula and information on the isotopes.

Project report submission

1. This project report must be presented in a standard technical report format. The content must include introduction, flowchart, results (program output) and discussion including program verification, and conclusion.
2. Fully commented source codes of the computer programs developed for the project must also be handed in. No mark will be given if the program softcopy is not submitted.
3. Report, code and relevant files must be zipped into a single file and submitted to the e-learning website.
4. Please include the following statement in the first page of the project submission. No mark will be given if this statement is not included.

I, *full name*, hereby declare that this project submission is a product of my own effort. I acknowledge that academic disciplinary action can be taken if this submission is a result of plagiarism or other form of scholastic dishonesty.

Yours Truly,
Your signature and date