

Polynomial multiplication

You need to be alert to (usually minor) changes that may be made to the assignment statement or to the guidelines after the assignment is first put up. Refresh this frame and re-read the assignment carefully before you make your final submission.

Assignment statement

Using the FFT/IFFT technique, you are required to multiply long integers (of say 1024 digits).

Develop a suitable data structure for representing such long integers.

Populate such data structures, as required, to obtain such integers with random digits, the number of digits to generate should be taken as a parameter. That way smaller integers may be generated for testing and larger integers may be generated for experimentation.

Submissibles

1. C-program, including peripheral routines, for multiplying large integers.
2. A report outlining the formulation of the mechanism to achieve the multiplication. The report should be written in latex. You should ensure that it compiles properly and generates a presentable PDF. However, only the .tex file needs be submitted. A [sample tex file](#) is also made available. That should be compiled with the command `pdflatex rep.tex` or just `pdflatex rep`. You can also work on this file using visual latex packages are available on both linux and windows.

Marking Guidelines

Assignment marking is to be done only **after** the deadline expires, as submissions gets blocked after the assignment is marked.

FFT, IFFT coding	10
Data structure for long integers and generation of long random integers	5
General working	5
Report as per assignment statement	5
<i>Total Marks</i>	25

Assignment submission

You need to submit a program file for the assignment and the report and also enhanced/optimised versions of routines (individual submission).

Use electronic submission via the [WBCM link](#)

You should keep submitting your incomplete assignment from time to time after making some progress, as you can submit any number of times before the deadline expires.

Warning

Cases of copying will be dealt with seriously and severely, with recommendation to the Dean to de-register the student from the course.