

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NITK-SURATHKAL

Assignment No:2

Date of submission : 23-09-2024 by 5:00PM

Subject: Algorithms and Complexity Submission guidelines: Same as the first assignment

Problem statement:

Design a tool (LaTeX), that is able to perform typesetting for technical and scientific documents.

Functional Requirement:

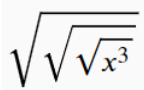
The tool should consist of:

- a. Editor section – where users can type the formulae or scientific notations using plain text and certain predefined tags or characters.
Latex converted section where the final converted text is displayed

Eg: $\$a/b\$$ to

$$\frac{a}{b}$$

$\$\sqrt{\sqrt{\sqrt{x^3}}}\$$



- b. Error Handling – indication of syntax errors or mis formatted commands

Mathematical typesetting

- a. Numerator & Denominator
 - b. Integration & differentiation
 - c. Summation & Products
 - d. Matrices & Tables
- c. File Management
 - a. Open/ save – ability to open and save new or edited files.

These are the minimum requirements. Students can have additional options. Input is a latex file.

Students can refer to the following for the better understanding:

<https://www.tug.org/twg/mactex/tutorials/ltxprimer-1.0.pdf>