

Practical 01 Specification – A Hand-on Exercise to develop an algorithm using LATEX
credit/no-credit

Due (via your git repo) no later than 8 a.m., Monday, 1st March 2021.

A Simple Exercise to develop an algorithm formally

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1. For simplicity, a starter code with a file named `songs1.tex` is provided in the practical repository. The starter code has an example formal algorithm discussed during class discussions.
2. A latex file may be developed using the Overleaf website link provided below:
`https://www.overleaf.com/login`
3. Please note: The Overleaf website may prompt you to register and log in before providing the options to compile latex files and generate pdf files. This should be a straightforward process. If there are any questions, students are encouraged to reach out to the Professor.
4. After logging in to Overleaf, create a new project with a name **Songs**
5. Copy over the code from the starter code (`songs1.tex`) to the new project created in the previous step. Remove all the existing LATEX content in the left pane and paste the LATEX content from (`songs.tex`). Modify the LATEX code to include the author name (add your name), and the date (submission date) in lines 15 and 16 respectively.
6. Click on the Recompile button. At this point, you will see an updated algorithmic content on the right pane.
7. Click on the Download PDF icon to download the PDF version. Name the PDF file as `songs1.pdf`.
8. Make necessary modification(s) to the file named `songs2.tex` to include the steps to identify the least played song. Assume that the maximum play count for a song to be 200. That is, we assume that a song cannot be played more than 200 times. Modify the LATEX code to include the author name (add your name), and the date (submission date) in lines 15 and 16 respectively.
9. Note: The code may not compile without adding the necessary algorithmic logic. Please add the similar logic (with the variation) as in `songs1.tex` starting from line no 32. After adding the corresponding logic, recompile the modified `songs2.tex` and produce a PDF using Overleaf. Name the PDF file as `songs2.pdf`.
10. Make edits to the honor-code.txt file. Here, read through the honor code statement and sign by replacing Student Name with your name. The honor-code is required to be signed for the work to be graded.
11. Interested in reading more about algorithm writing in LATEX:

`http://tug.ctan.org/macros/latex/contrib/algorithm2e/doc/algorithm2e.pdf`

See next page...

Submission Details

For this practical, please submit the following to your GitHub repository by using the link shared to you by the Professor:

1. Modified and Commented LATEX code from the “songs1.tex” program.
2. Modified and Commented LATEX code from the “songs2.tex” program.
3. A document containing the songs1 algorithm, named `songs1.pdf`.
4. A document containing the songs2 algorithm, named `songs2.pdf`.
5. It is highly important, for you to meet the honor code standards provided by the college and to ensure that the submission is completed before the deadline. The honor code policy can be accessed through the course syllabus.