

Spectral Graph Theory

Assignment-1

A Helpful Tool - Git

You'll find Version Control System tools like Git helpful for this project. So create a userID on github.com if you don't have one.

- What is this thing? : <https://git-scm.com/book/id/v2/Getting-Started-About-Version-Control>
- How to use Git? : <https://www.atlassian.com/git/tutorials/setting-up-a-repository>
- Summary of this Git thing? : <http://rogerdudler.github.io/git-guide/>

Your Task:

→ Create a github repo. and keep all your code on that repo. (also you need to put that code on my repository <https://github.com/raghukul01/Spectral-Graph-Theory>)

A flavour of STL

Since most of our algorithms would be graph algorithms, you will find that implementing them in CPP is much more easier (with the beautiful support Standard Template Libraries(STL)).

Your Task:

- Learn C++ using the pdf provided (till page 85 - as oop is not needed - interested students can read further).
- Learn STL from top coder (<https://www.topcoder.com/community/data-science/data-science-tutorials/power-up-c-with-the-standard-template-library-part-1/> both part 1 and part 2)
- Write a C++ program, to solve this problem (<http://www.spoj.com/problems/PRIME1/>)

L^AT_EX

I am typing this whole task in L^AT_EX . Do you also want to learn this? You can search on youtube "Sharelatex tutorial" and find a playlist with 7 videos.

Your Task:

→ Write the proof of Wilson's Theorem in L^AT_EX. You can search the web for proof but write the document on your own.