CP2 : Reading Material VI

Miscellaneous tricks

July 27, 2017

Contents

1	Parallel Binary Seach	1
	Reading Material	1
	Exercises	1
2	DSU on trees (or small to large merging)	2
	Reading material	2
	Exercises	2
3	DFS order	2
	Reading Material	2
	Exercises	2
4	Centroid Decomposition(optional)	2

1 Parallel Binary Seach

Reading Material

Read this post.

Exercises

Solve exercises at the bottom of same post.

2 DSU on trees (or small to large merging)

Reading material

Read this post.

Exercises

Do some of the problems marked easy at the bottom of the post above (until you are comfortable with technique), and then stab these problems:

- Race, IOI 2011
- CF343D
- CF741D(hard)

3 DFS order

Reading Material

Here is a somewhat decent write-up about how to use DFS order cleverly.

Exercises

- CodeChef TAQTREE This is good for learning the idea, try to solve yourself.
- CodeChef ANCESTOR This is almost unfairly hard, but it is a lovely problem. There is no editorial, so I will post a write-up of my solution sometime next week.

Ideally, I would have liked for there to be another problem between those two, but I couldn't find (or remember) one that fits; if any of you know some appropriate problem, please let me know via email before this weekend, and I can assign that too.

4 Centroid Decomposition(optional)

Read this, and solve as many problems as you can at the bottom (most of them are not easy).