

3qamr to Expert

Contest Participating

- [TO ACPC'23 Assiut](#)
- Participating in Atcoder beginner contest every week. Abc_abcd(e)

Topics

Graph:

- Sheet
 - [Graphs: Topological Sorting](#)
 - [Graphs: Trees and Tree Traversals](#)
 - [Shortest Paths: Single Source](#)
- Strong connect component
 1. Using Trajan, kosaraju, floyed
 2. Find Bridges, articulation point, Bridges tree
 3. DP on DAG
- Floyed



Dynamic Programming

- Counting With DP
 - Resources:
 - [Introductory Combinatorics](#)
 - What ,Is Combinatorics?
 - Permutations and Combinations
 - The Pigeonhole Principle

- Generating Permutations and Combinations
 - Sheet:
 - [Counting: Rule of Sum, Rule of Product](#)
 - [Counting: Permutations and Combinations](#)
 - [DP with Solution Construction](#)
 - [DP consecutive, nested, general Ranges](#)
 - Extra:
 - [DP: Classic Problems with Twists](#)
 - [DP: Common Patterns](#)
 - [DP on Subsets](#)
-



Data structure

- [DSU from](#)
 - [MST using kruskal & Prim's.](#)
 - [BIT \(Very Important\)](#)
 - Sparse table
-



Number Theory

- [Number Theory: Divisibility, Modular Arithmetic](#)
-



Greedy

- [Greedy: Exchange Argument](#)
 - [Greedy Stays Ahead](#)
 - [Structural Argument](#)
-



String

✓

- [Rolling Hashing, Double Hashing](#)