

GB21802 - Programming Challenges

Week 6 - Graph Problems (Part II)

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Last Week Results

Week 5 - Graph I

- Jill Rides Again - 15/32

Special Notes

Week 5 and 6 – Outline

This Week - Graph I

- Graph Basics review: Concepts and Data Structure;
- Depth First Search and Breadth First Search;
- Problems you solve with DFS and BFS;
- Minimum Spanning Tree: Kruskal and Prim Algorithms (Monday);

Next Week - Graph II

- Single Source Shortest Path (Dijkstra);
- All Pairs Shortest Path (Floyd Warshall);
- Network Flow and related Problems;
- Bipartite Graph Matching and related Problems;

Many variations in graph problems!

Summary

This Week's Problems

- Dominator;
- Knight in a War grid;
- Wetlands in Florida;
- Battleships;
- Pick up Sticks;
- Place the Guards;
- Street Directions;
- Dominos;
- Freckles;
- Artic Network;

Next Week

More Graphs!

- Network Flow (and related problems);
- Graph Matching (bipartite matching, etc) (and related problems);