title

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First 2 slides contain sample blocks, columns and stuff hello

Remark

in block

important theorem

in alertblock

Examples

in users block

text in frame
this is alert

columns

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text in first column

$$E = mc^2$$

text in second column

- first item
- hello there

Real World Applications

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Maximum Bipartite Matching
CSE 300 Presentation

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Bipartite Graph Definition

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Maximum Matching

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Max Flow Problem Overview

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Relating Max Flow Problem with Maximum Matching

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Max Flow problem Algorithm

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- solving max flow using ford fulkerson takes $O(ef^*)$ time, where f^* = max flow, but in our problem, f^* = n = no of vertices and no of edges = m + 2n, m = no of edges in bipartite graph and 2n edges are added later to convert the problem into max flow problem. So running time

$$= O((m + 2n)n) = O(mn + n^2) = O(mn)$$

- but, we can use a simpler way to solve this since edges are unweighted, although we get same time complexity
- even simpler way is a recursive way which is shown as "Alternative approach" in the fancy slides from the internet

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Time Complexity

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Alternate solutions

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References

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