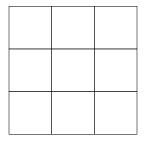# Design and Analysis of Algorithms — Lab

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## Session 9: Backtracking

Magic Square

4 March 2020

Problem: Fill the 9 cells of the $3 \times 3$ square shown below with numbers 1 to 9 such that sum of the numbers in each row, or each column, or each of two diagonals, is the same.



1. Use backtracking to do exhaustive search for the answer in the state space of the problem.

2. Use pruning to speed up the search for the answer.