CSE 402: Offline Assignment 4

Solving Futoshiki using CSP techniques

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CSP Formulation: Solving Futoshiki is a CSP. We formulated the CSP by defining variable, value and constraints.

Here the variables are the grids or squares of the board. That means, every square is a variable here.

The domain is the numbers. That means, if the board is N*N, then domain values are 1to N.

Constraints are that every rows and columns should contain different values. And at some point there will be some inequalities.

Board Size	Variable Ordering	Value Ordering	Run-Time	Variable Count	Value Count
5*5 -1	**Degree**	**First available**		**46**	**46**
5*5 -2	**Degree**	**First available**		**145**	**145**
5*5 -3	**Degree**	**First available**		**44**	**44**
5*5 -4	**Degree**	**First available**		**102**	**102**
5*5 -1	**MRV**	**First available**		**556**	**556**
5*5 -2	**MRV**	**First available**		**91**	**91**

5*5 -3	MRV	First available		446	446
5*5 -4	MRV	First available		292	292
5*5 -1	First available	First available		573	573
5*5 -2	First available	First available		274	274
5*5 -3	First available	First available		246	246
5*5 -4	First available	First available		355	355