

Heuristics Analysis:

Scoring Functions:

1. Custom_score: This heuristic employ scoring scheme where you are trying to make aggressive move in order to thwart your opponent by leaving him/her with least possible moves. The weight of 3 (as seen in code) can be tweaked to reduce/increase the aggressive of the game.
2. Custom_score_2: This heuristic is based on the strategy that player should have more moves than opponent and opponent should have less moves compared to the player.
3. Custom_score_3: The above strategy can be used with weights giving it more aggressive approach. In code we have used weight of 1.5.

Results of Tournament showing respective score and heuristic performances:

***** Playing Matches *****									
Match #	Opponent	AB_Improved		AB_Custom		AB_Custom_2		AB_Custom_3	
		Won	Lost	Won	Lost	Won	Lost	Won	Lost
1	Random	9	1	10	0	9	1	9	1
2	MM_Open	5	5	6	4	5	5	7	3
3	MM_Center	8	2	10	0	9	1	8	2
4	MM_Improved	5	5	5	5	6	4	5	5
5	AB_Open	7	3	5	5	4	6	5	5
6	AB_Center	5	5	6	4	4	6	4	6
7	AB_Improved	6	4	4	6	7	3	6	4
Win Rate:		64.3%		65.7%		62.9%		62.9%	

Conclusion: In the above implementation, the custom scoring function which uses aggressive approach has resulted in better performance than AB_Improved by nominal margin. Further, evaluation of possible heuristic is required to gain better improvements.