Assignment 2

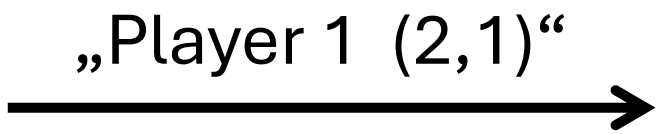
SPP reversi

Gameplay Implementation

Changed Datastructures

- Neighbour Arrays
- Hashmap for owners

0	0	0
1	2	0
0	0	0



1	1	1

Further Improvements

- Byte Hashmap
- Position datastructure storing moves
- Efficient bombing algorithm

Heuristics

Classical heuristics

- Most stones

- Problem: not really important in the first half

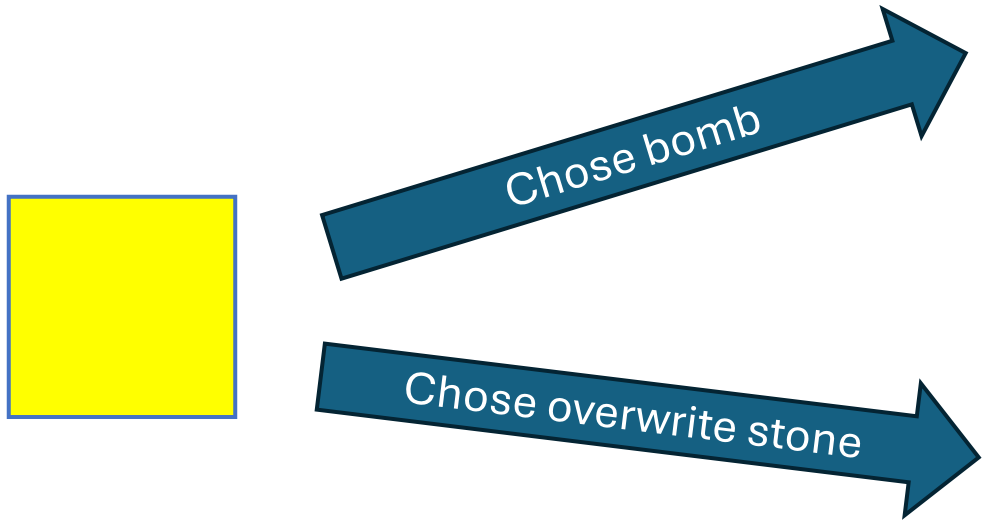
Corner Border heuristic

- Corners = 5 pts
- Borderstone = 1 pts

Testing results

time + us	most stones	least stones	first	Corners+Borders
5s P1	32 / 32	38 / 26	28 / 36	38 / 26
5s P2	38 / 26	50 / 14	9 / 55	32 / 32
2s P1	36 / 28	38 / 26	28 / 36	38 / 26
2s P2	32 / 32	13 / 51	50 / 14	5 / 59

Item heuristic



Usually more "absolute" impact

Enables more moves
-> can keep the player alive
-> "compounding" impact

Item heuristic - our solution

```
int factor = 1;
if(overwrites < 3){
    factor = 2;
}

return bombs*modell.getBombStrength()+overwrites*factor*2;
```

Neighbour heuristic

- How are bonus tiles captured?
- Same applies to choice, inversion
- Deny the opposition recources
- At what cost?