Missionaries and Cannibals

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Peas

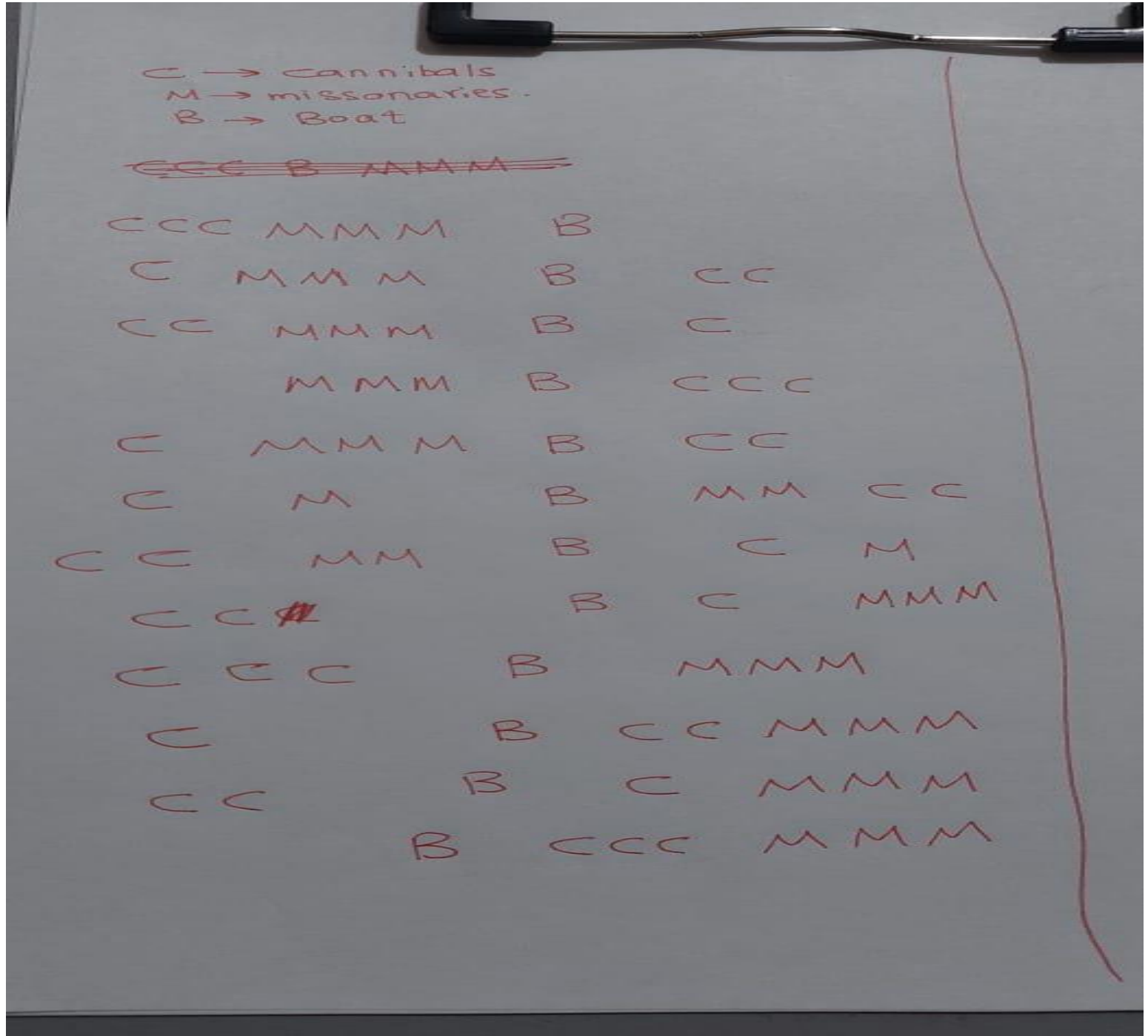
- Performance : win the game
- Environment : 3 missionaries , 3 cannibals , river, 2 bank , and boat
- Actuators : boat sails from one side to another side ,screen
- Sensors :mouse and camera

ODESA

- Observability : fully
- Deterministic : deterministic
- Episode : sequential
- Static : static
- Agent : single

Missionaries and Cannibals Problem

- **State**: combination of missionaries and cannibals and boat on each side of river.
- **Initial state:**3 missionaries, 3 cannibals and boat are on the near bank
- **Successor function**: move boat containing some set of occupants across the river to the other side
- **Constraint**: missionaries can never outnumbered by cannibals on either side of river, or else the missionaries are killed
- **Action** : raid the boat with maximum two persons across the river to the other side
- **Goal Test** : Move all the missionaries and cannibals across the river
- **Path cost** : minimum number of moves.


C → cannibals
M → missionaries.
B → Boat
~~CCC B MMM~~
CCC MMM B
C MMM B CC
CC MMM B C
MMM B CCC
C MMM B CC
C M B MM CC
CC MM B C M
CC B C MMM
CCC B MMM
C B CC MMM
CC B C MMM
B CCC MMM

- Agent Type : Goal based reflex agent.
- Algorithm :Depth first search