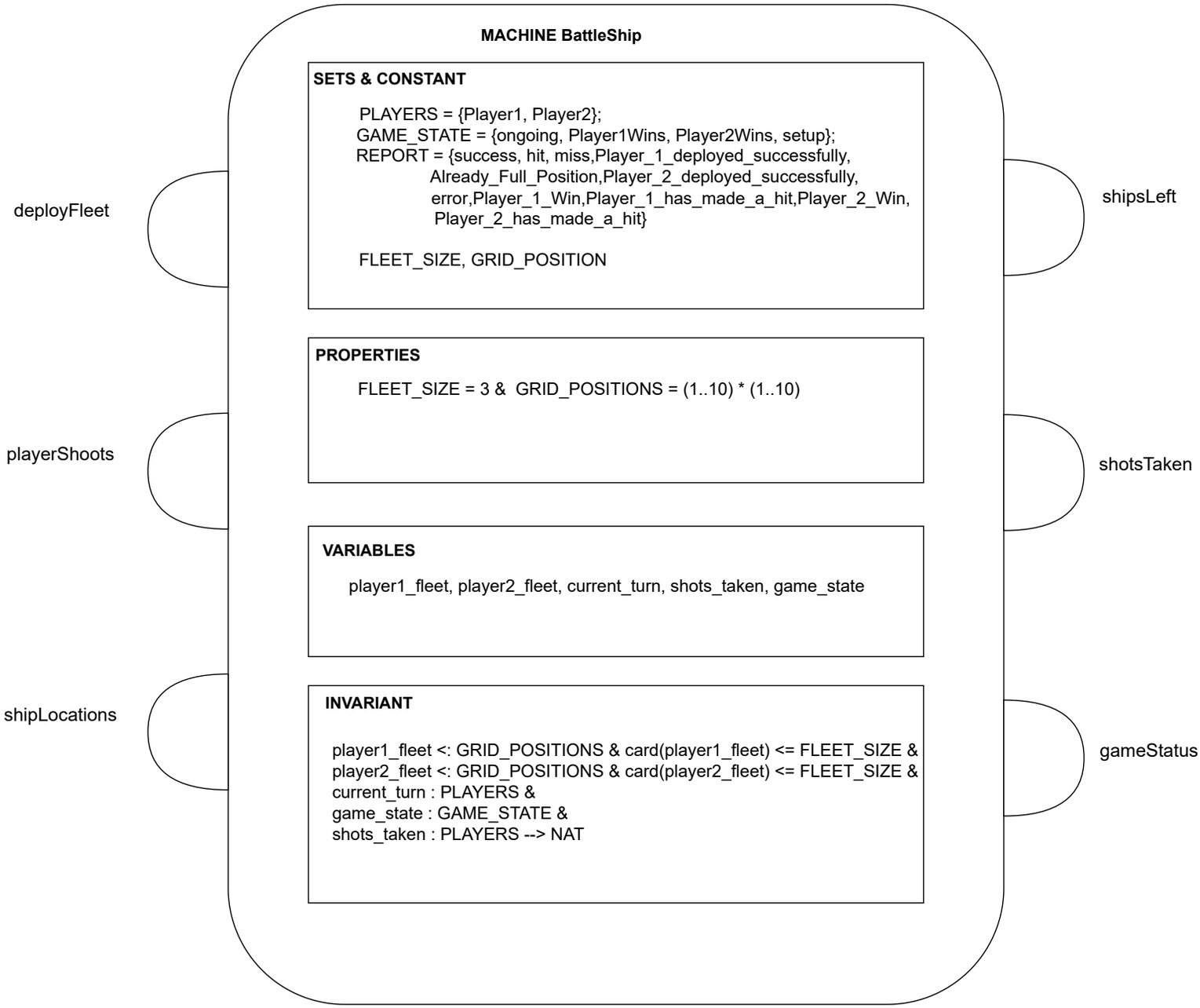
MACHINE BattleShip
SETS & CONSTANT
PLAYERS = {Player1, Player2};
GAME_STATE = {ongoing, Player1Wins, Player2Wins, setup};
REPORT = {success, hit, miss,Player_1_deployed_successfully,
Already_Full_Position,Player_2_deployed_successfully,
error,Player_1_Win,Player_1_has_made_a_hit,Player_2_Win,
Player_2_has_made_a_hit}
FLEET_SIZE, GRID_POSITION
PROPERTIES
FLEET_SIZE = 3 & GRID_POSITIONS = (1..10) * (1..10)
VARIABLES
player1_fleet, player2_fleet, current_turn, shots_taken, game_state
INVARIANT
player1_fleet <: GRID_POSITIONS & card(player1_fleet) <= FLEET_SIZE &
player2_fleet <: GRID_POSITIONS & card(player2_fleet) <= FLEET_SIZE &
current_turn : PLAYERS &
game_state : GAME_STATE &
shots_taken : PLAYERS --> NAT
deployFleet
playerShoots
shipLocations
shipsLeft
shotsTaken
gameStatus