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graph LR
    200((Initial State 200)) -- Identify Agents --> 201((Orient Bot 201))
    201 -- Facing Left From Ball --> 202((Turn Right 202))
    201 -- Facing Right From Left --> 203((Turn Left 203))
    201 -- Estimate Future Ball Location --> 204((Drive 204))
    201 -- Inaccurate Estimation, Estimate Again --> 204
    202 -- Chase Ball Again --> 201
    203 -- Lost Track of Bot --> 201
    204 -- Poor proximity estimation --> 201
    204 -- In appropriate proximity to ball --> 205((Kick 205))
    205 -- Lost Track of Bot --> 201
    201 -- Lost Track of Bot --> 200
  
```

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graph LR
    IS100((Initial Stage 100)) -- Identify Agents --> OB101((Orient Bot 101))
    OB101 -- Left of Ball --> PL103((Pivot Left 103))
    OB101 -- Right of Ball --> PR104((Pivot Right 104))
    OB101 -- Reach the ball --> D105((Drive 105))
    D105 -- Check Orientation --> OB101
    D105 -- Lose Orientation --> OB101
    D105 -- Build Speed --> K106((Kick 106))
    K106 -- Finished --> AS107(((All Stop 107)))
    OB101 -- Facing Away From Ball --> OB101
    OB101 -- Lost Track of Bot --> IS100
    D105 -- Lost Track of Bot --> IS100
    K106 -- Lost Track of Bot --> IS100
  
```

Soccer Game State Diagram

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graph TD
    IS1((Initial State 1)) -- "Identify Agents" --> ET2((Estimate Ball Trajectory 2))
    ET2 -- "Check orientation" --> OB3((Orientate Bot 3))
    OB3 -- "Re-calculate trajectory" --> CB4((Chase Ball 4))
    CB4 -- "Close to Boundary" --> R7((Reverse 7))
    CB4 -- "Appropriate distance from opponent" --> CA6((Calculate Angle 6))
    CB4 -- "Opponent has angle to goal" --> D5((Defend 5))
    CB4 -- "Too close to opponent" --> IS1
    CA6 -- "Angle to goal is good" --> K9((Kick 9))
    CA6 -- "Angle to goal is bad" --> P8((Push 8))
    K9 -- "Score a goal" --> AS10(((All Stop 10)))
    P8 -- "Opponent scores" --> AS10
    D5 -- "Ball is safe from our goal" --> AS10
    R7 -- "Miss Goal" --> CB4
    style IS1 fill:#fff,stroke:#000,stroke-width:2px
    style AS10 fill:#fff,stroke:#000,stroke-width:2px
  
```