

Practical no: 6

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Subject: Software Engineering and Project Management Lab

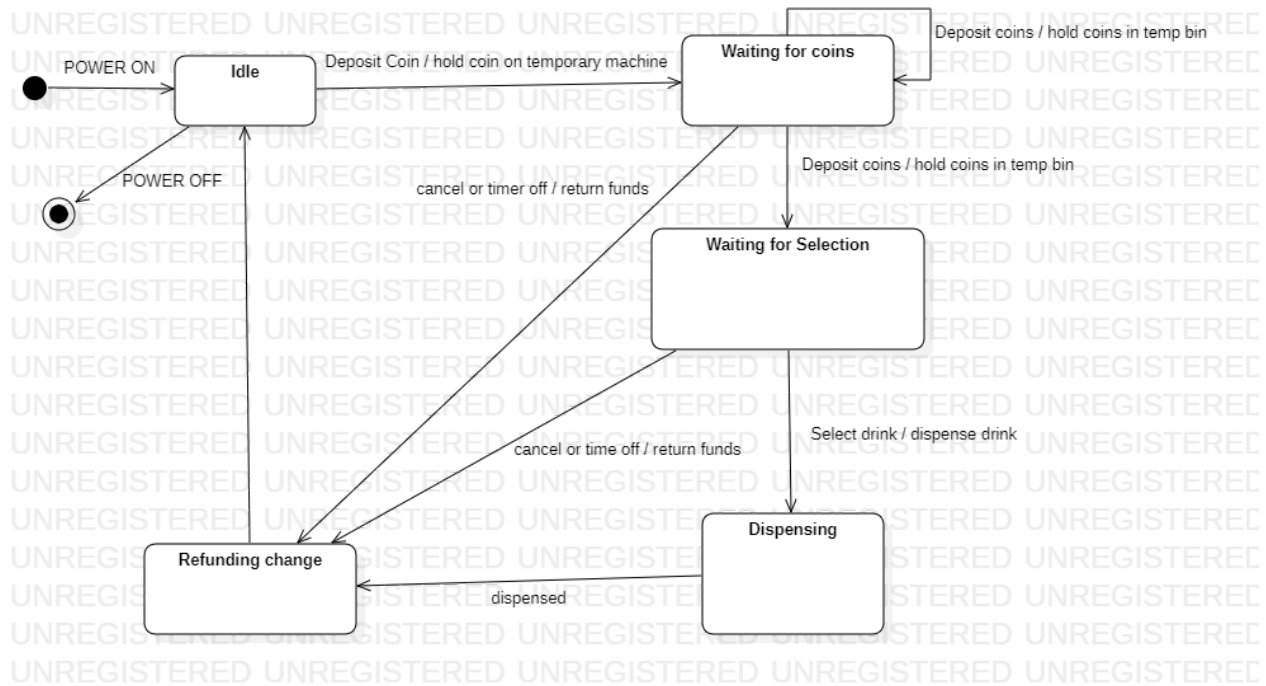
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Aim: 1) Draw a state diagram for a vending machine.

2) Draw a state diagram for a chess game.

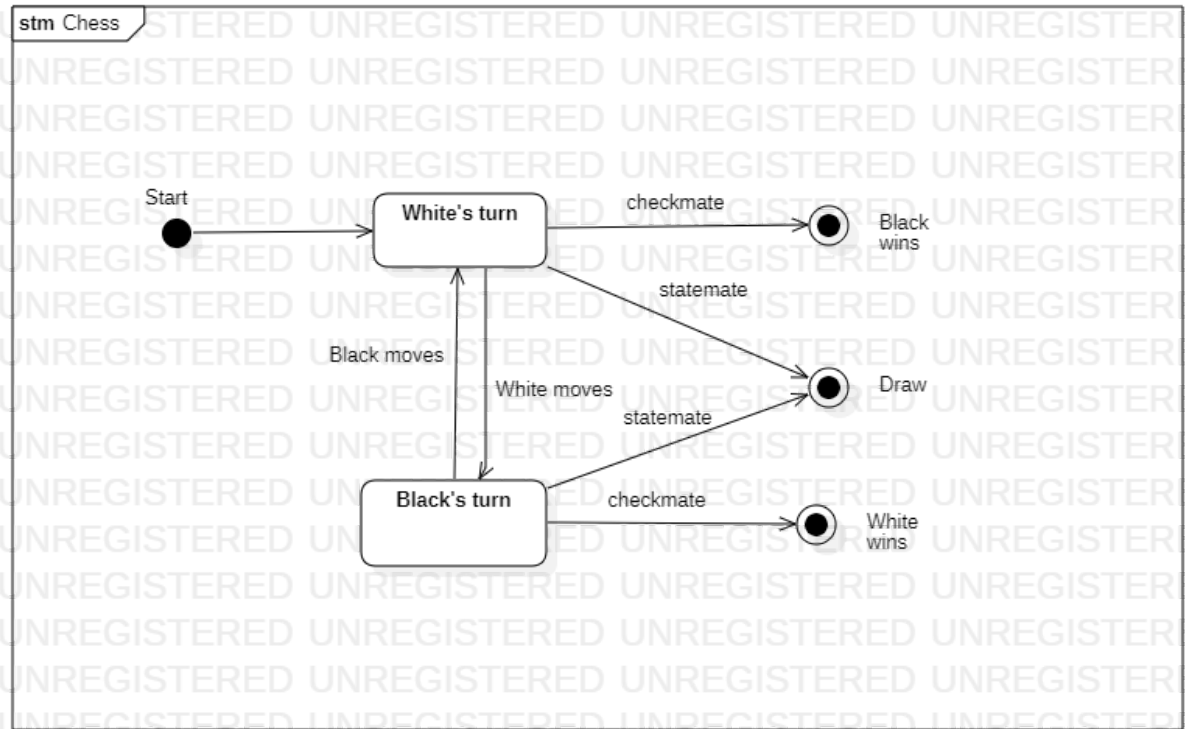
1. State Diagram for a Vending Machine :

- 1) List all possible states (e.g., Idle, Waiting).
- 2) Identify triggers like inserting money or selecting a product.
- 3) Represent states as rounded rectangles.
- 4) Use arrows to show transitions between states.
- 5) Add actions triggered by events.
- 6) Include conditions for transitions if needed.
- 7) Double-check for accuracy and completeness.
- 8) Use nested rectangles for complexity.
- 9) Add a legend for symbols and notations.
- 10) Ensure clarity and logic, refine as needed.



2. State diagram for a chess game

- 1) Start with the initial chess board setup.
- 2) Identify states like "Player 1's Turn," "Player 2's Turn," "Check," and "Game Over."
- 3) Specify events like "Move Piece" or "Check Declared."
- 4) Represent states with rounded rectangles.
- 5) Use arrows to show state changes based on events (e.g., from "Player 1's Turn" to "Player 2's Turn" after a move).
- 6) Note actions associated with events, such as updating the board.
- 7) Include conditions for transitions, like checking for checkmate.



Conclusion : In conclusion, our exploration and implementation of state diagrams have provided valuable insights into modeling complex systems. By breaking down processes into distinct states, we've gained a clearer understanding of how these systems evolve over time. The practical application of state diagrams, whether in a vending machine or a chess game, has underscored their effectiveness in visually representing dynamic behavior.