Project3

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I worked on the following parts in this project:

1. **Debugging and Optimization:** I was primarily responsible for debugging the code and optimizing the implementation. This involved identifying and resolving errors, refining the logic, and ensuring the overall efficiency of the algorithms.

2. **Random Initialization for Knight's Tour:** For the random initialization part in Part 1, I worked on incorporating a mechanism to randomly advance the knight's tour by 'k' steps. This involved selecting random valid moves and updating the board accordingly.

3. **Warnsdorff's Algorithm for Deterministic Tour:** In Part 2, I implemented Warnsdorff's algorithm for the deterministic part of the Knight's Tour problem. This included designing the logic to efficiently choose the next moves based on the availability of future moves and applying the deterministic strategy.

4. **Function Implementation:** I contributed to the implementation of various functions, including those for finding valid starting positions, checking valid moves, and handling backtracking during the algorithm execution.

5. **Backtracking Mechanism:** In both deterministic and random scenarios, I implemented the backtracking mechanism to explore alternative paths on the chessboard when encountering unsuccessful moves. This involved efficiently undoing previous moves and exploring alternative paths systematically.