

## Assignment 2 – Part 1 Solution

Previous moves performed by each player:

**1. White Knight b8-c6**

Since all other pieces of white side are at their places it is evident that only knight which is removed from his place will move from white side. Also the other knight can also be moved and placed again to its original position but then it will take more moves by white pieces and our goal to remove one knight cannot be fulfilled.

**2. Black Pawn d2-d3**

The goal position shows movement of D2 Black pawn.

**3. White Knight c6-d4**

**4. Black Knight b1-d2**

Since white knight is not present in the goal state thus after observing the goal state we can conclude that one of the black knight is required to remove the white knight. The G1 black knight will require more moves to replace/remove the white knight thus move B1 black knight.

**5. White Knight d4-e2 (Replace Black Pawn)**

**6. Black Knight d2-f3**

**7. White Knight e2-g1 (Replace Black Bishop)**

**8. Black Knight f3-g1 (Replace White Knight)**

Last two are required so that we can get the final goal state where white knight is removed and black knight is present at G1