Knight’s Move

Scenario

Knight is a special piece in the game of “chess”. It moves up or down one square vertically and over two squares horizontally OR up or down two squares vertically and over one square horizontally. This movement can be remembered as an "L-shape" because it looks like a capital “L”. Figure-1 shows the possible places for the knight to move by highlighting in red color.

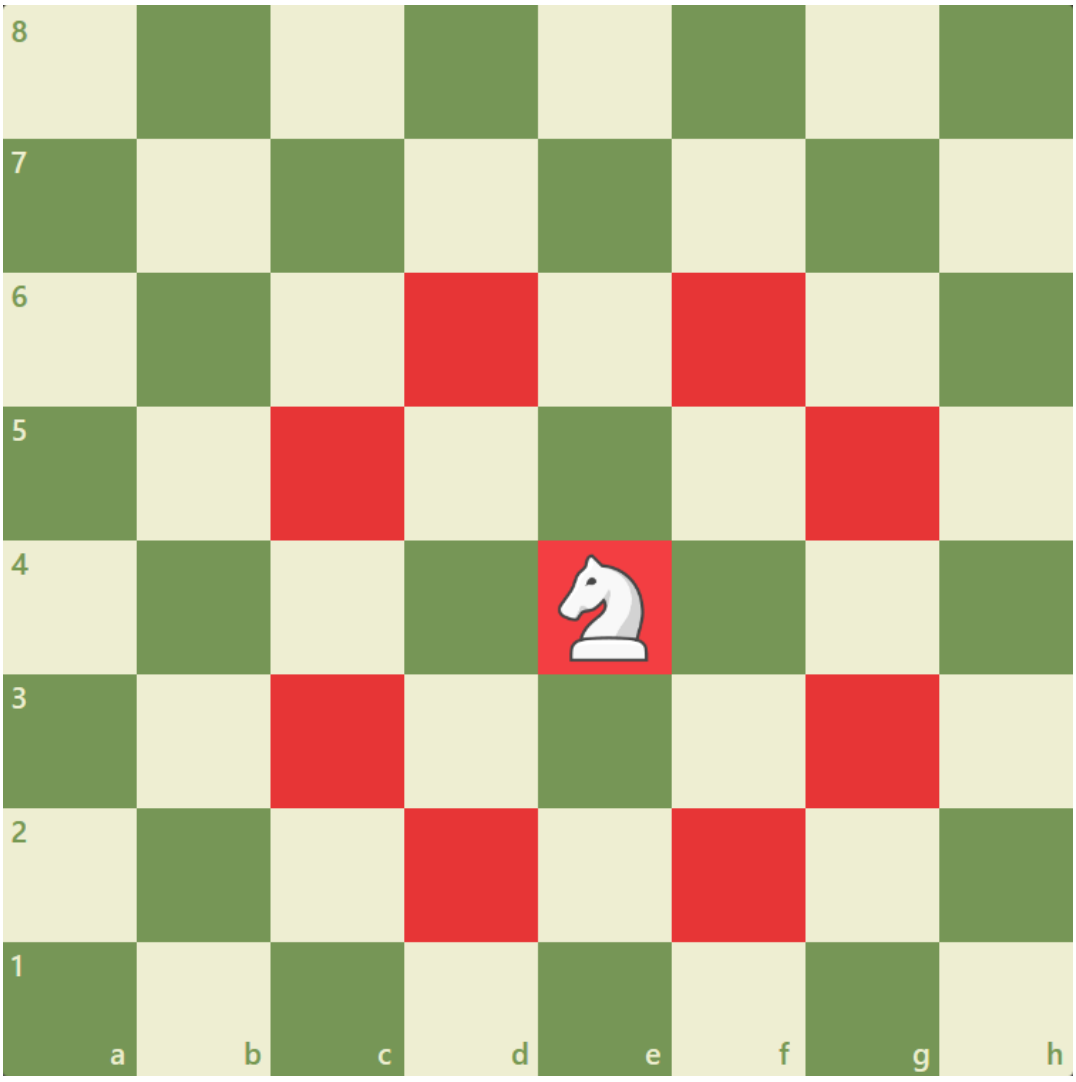

Figure-1: Knight’s move from the square e4.

A square in a chessboard can be identified by row and column index, represented by numbers (1-8) and letters (a-h). In the above example, the knight is located in the e4 square, and its possible valid moves are (d2, f2, c3, g3, c5, g5, d6, f6).

Task 1: (Marks 70)

Your task is to write a function named ***validate***, that takes two strings (each containing 2 characters) as parameters and returns an integer value.

i. First parameter indicates the initial location of knight
ii. Second parameter indicates the target location of the knight.
iii. The function returns 1, if the target location is valid, otherwise it returns 0

For example:

i. If you call the function as ***validate("e4", "d2")*** it will return 1
ii. If you call the function as ***validate("e4", "e2")*** it will return 0

Task2: (Marks 30)

Write a user-defined function named ***targets*** which will take the initial location of a knight as a parameter and prints all possible valid target locations. You may follow any order while printing the valid target location.

For example:

i. If you call the function as ***targets("a1")*** it will print **b3** and **c2**.
ii. If you call the function as ***targets("e4")*** it will print (**d2, f2, c3, g3, c5, g5, d6, and f6**)
[The order may vary based on your implementation]