



### **Kabam Homework Assignment – Frontend**

**This exercise is not intended to take more than 3 hours but is not limited to 3 hours. We will be evaluating your sample more on class structure and clean decomposition than flair and visual flourishes.**

Your goal is to produce a simplified version of chess using AS3 that fulfills the following criteria (\* indicates optional but encouraged). The emphasis should be on demonstrating strong knowledge of programming principles such as design patterns, decomposition and encapsulation over pure aesthetic or design ability (a good code test doesn't have to be pretty).

#### **Setup:**

- The board should consist of an 8x8 grid of black and white tiles that alternate in a checkerboard fashion
- The board should contain a black and a white version of 3 visually distinct pieces (Knight, \*Bishop, \*Queen)

#### **Behavior:**

- A Piece may destroy a piece of the opposite color by moving to the space occupied by it
- The allowed movements for the Bishop, Knight, and Queen should correspond to their actual movements in chess
  - Knight: two horizontal and one vertical or two vertical and one horizontal in any direction (L)
  - Bishop: unlimited number of diagonal tiles unless blocked by another piece
  - Queen: unlimited number of diagonal, vertical, or horizontal tiles unless blocked by another piece

#### **UI:**

- The starting location of these six pieces should be randomized such that they do not overlap and the operation is guaranteed to complete in fixed time
- When hovering over a piece, highlight all tiles it can legally move to
- Play a sound and a simple visual effect when a piece is destroyed

**Please return the assignment as an attachment via email within 48 hours of receiving (2 days).**

Please let us know if you have any questions.

Thank you and good luck!

-Kabam Recruiting Team

