



Game Developer Test for King

Purpose

The goal is to provide a relevant, fun and inspirational foundation for a technical conversation for an upcoming interview. The submitted code itself together with an interview will provide the interviewer with an understanding of the applicants coding style and skills.

In our experience of evaluating this test, candidates generally take between 15 – 25 hours to complete. We don't necessarily expect a complete solution covering all special cases in a 100% robust way, but please keep in mind that it may be difficult to evaluate a candidate's ability if a lot of key features are missing.

Game Concept

- The game consists of an 8x8 grid with different coloured jewel objects
- Objects can be switched with other adjacent objects:
 - If this switch results in 3 or more objects of the same colour in a row or column, these objects are removed from the game
 - If the switch does not result in a match, the switched objects are returned to their original position
- When objects are removed from the game, existing objects with nothing beneath them should fall down whilst new objects should fall in from the top to fill in the blank spaces
- The game should be 1 minute long
- There are 5 coloured objects
- Objects can be switched either by clicking on one and swiping up, down left or right, or by clicking on one object and then another
- Use a game like Midas Miner for reference (www.king.com)
- Use the supplied images as texture resources to use in the game

Tools and Frameworks

- **The game must run on Mac and/or PC, bonus points for iOS and/or Android.**
- **Please include prebuilt binaries of the game that can be launched out of the box.**
- You may develop the game in a language that you feel most comfortable with and that will showcase your skills. Anything goes, but please limit the size of your entire submission & project to a reasonable size (below 50 MB).
- You are allowed to use 3rd party or your own private libraries to help develop the code but we will only be evaluating code that has been written for this developer test.
- Please remember that we want to be able to test your game without having to install obscure window libs – the game should run and build properly from scratch with minimal configuration effort.

Evaluation

A rough guide as to how we will evaluate the test is as follows:

- Code reusability and maintainability 30%
 - *Separation of concerns*
 - *A well thought out design and structure is evident*
 - *New game features could easily be added*
- Code safety 30%
 - *Good memory management*
 - *Easily understandable code*
 - *Low bug count*
- Code performance 10%
 - *Not wasteful of cycles*
 - *Efficient algorithms*
 - *Not at the cost of readability*
- Gameplay and user experience 30%
 - *Test performs well against the specification*
 - *Looks and feels slick*
 - *Effortless and easy to play*

Any additional features or game polish are welcomed, but the candidate is encouraged to focus on the above list first.