**Homeside Junior Developer Coding Challenges**

The following coding challenges are meant to gauge your current knowledge of Junior-level concepts. The exercises mimic scenarios that you would encounter as a Junior Software Developer at Homeside. Each challenge is given a star (\*) ranking based upon the difficulty out of five stars. The final two challenges have added difficulty scenarios that are not required for successful completion, but are provided if you feel like challenging yourself.

**Criteria for Completion**

1. You must complete 1 challenge within 5 business days + 2 weekend days of receipt.
   1. You may finish before the deadline and submit your code for review.
2. All code is to be hosted on your personal repository (BitBucket or Github preferred)
3. If you cannot finish any of the challenges, *that’s ok*. You will then be required to submit a document detailing your thought process on how you would solve the challenge.
4. If you decide to complete the 1st challenge, please provide a brief description of how you would tackle the 2nd and 3rd challenges.

**Challenge Details**

1. The following code challenge has been issued to: **James Lee**
2. The code challenge will be assessed by: **Sean O’Callahan**
3. **Due Date**: Thursday, November 23, 2017 by 9am.

**Challenge 1: MTV Cribs - Homeside Edition**

**Difficulty: \*\***

Create a webpage that features all Homeside locations on a map. A user should be able to click a location on the map to see further details. Search other company location pages for inspiration. Designing/making the page pretty is not required. A simple black/white representation of a locations page is sufficient.

**Stipulations:**

1. Use any front end language
2. Use C#, Java, or Ruby as the middle tier if needed
3. Use the Google Maps API
4. Use the attached word document titled *HomesideBranchLocations.docx* for the Homeside location addresses to display.

**Added Difficulty for the Brave: (Adjusted Difficulty \*\*\*)**

1. Use the *Style Guide* folder in the *HomesideCodingChallenges* folder to style your locations page with the appropriate Homeside colors and logo.

**Challenge 2: h0tline bling**

**Difficulty: \*\*\***

Create a simple web page that contains a form which accepts two inputs:

1. Phone Number
2. Message

The form should have a “Send Message” button which sends the inputted message to the phone number entered into the form.

**Stipulations**:

1. Use any front end language
2. Use C#, Java, or Ruby as the middle tier if needed
3. Use the free SMS API: <https://textbelt.com/>

**Added Difficulty for the Brave: (Adjusted Difficulty \*\*\*\*)**

* Use a Deserializer/Serializer library to handle the object to JSON conversion rather than hardcoding the JSON request.

**Challenge** **3**: **All Your Data Are Belong to Us**

**Difficulty**: \*\*\*\*

The Sales Managers need to analyze total production across all Homeside branches. They give you a spreadsheet that has 1000 loan numbers, the amount of each loan, and the branch that sold the loan. They need you to create a console application that they can feed any excel document with 3 columns, "branch", "loan\_number", and "loan\_amount", then parse the data into a new file that shows the totals of each branch.

One more wrinkle, the data visualization tool the managers use to analyze the numbers only accepts CSV's with pipes " | " as the delimiter. Your application needs to take the excel file and convert it to the required file format.

The new CSV should also contain a "Total Production" row which shows all combined branch data.

The attached spreadsheet labeled *SalesData* contains production data for Homeside branches across the country. Also see the FinalCSVLayout-SalesData.png for a sample of what the final CSV should look like.

**Stipulations**:

1. Use C#, Java, or Ruby

**Added Difficulty for the Brave: (Adjusted Difficulty \*\*\*\*\*)**

1. If using C#- implement the nuget package called *Topshelf* and turn the Console Application into a Windows Service.