**High Level Overview**

A web application that pulls in transaction details (we will provide sample data) and allows the user to set alerts/business rules and receive notifications around them. The system should also save data to a database so recurring reports can be created.

**Requirements**

1. Must be a web application built in a “newer” web development framework
   1. .Net preferably – if you choose another framework, support from us will be limited
2. Client side framework/libraries are up to you but must be included in project (aka no external resources)
3. Database should preferably be in SQL server 2012 or above – if you choose another database option, support from us will be limited.
4. **Home Page**
   1. Transaction list sorted by date
      1. Don’t need to worry about searching/filtering
   2. Ability to export transactions
5. **Alerts** - Tool should allow for configurable business rules to be created to alert user when transactions fit into a set of criteria.
   1. Users should be able to Add/Edit/Delete business rules without technical assistance.
   2. These are examples (you have the liberty of coming up with what types of business rules there are and how they are implemented):
      1. Minimum of 3 business rules added to system
         1. Ex: Out of state transactions
         2. Ex: Timeframe usage
         3. Ex: Categories
6. **Notifications based on Business Rules**
   1. Main Requirement: Notification when the user logs in
      1. Ex: Transaction in Alaska
      2. Ex: Transaction at 2AM
      3. Ex: Transaction from Spa
   2. Stretch Goal: Messaging center in the app
      1. Up to your team how to implement this
   3. Stretchier Goal: Notifications via email or text message
      1. Up to your team how to implement this
7. **Reporting** 
   1. Dashboard:
      1. Number of times each alert has been tripped over the past month and year
         1. Daily screen should be easy to read, easy to use, and provide a snapshot of data
      2. Ability to hide alerts where the times tripped is zero
   2. Ability to pull/compare business rule different timeframes
   3. Ability to export to spreadsheet

**Stretch Goals**

1. Unit testing
2. Deploy the project into a windows server/cloud instance
   1. Practice configuration properties for different environments
3. Use a front-end Framework (Decide from beginning)
4. Create a Web API layer for backend interactions.
5. Use an open source reporting tool/business intelligence suite for all the reporting and its data visualization
6. Use version control throughout the project
7. Security scan your application. OWASP ZAP is a good open source option.

During final presentation, we would like to see the following:

* Working application
  + Home Page
  + Ability to set up business rules
  + Alerts trigger when transactions are added and fit criteria
  + Notifications
  + Reporting
* Takeaways
  + Did you learn anything new?
  + Did you experience any setbacks? What did you do to overcome them?
  + Suggestions for future projects

**Suggestions:**

* Ask questions when you don’t understand something.
* Feel free to modify the project data we send to fit your needs.
* Start early. Things that don’t seem like they’ll take long usually do.
* Split the work. One person shouldn’t be doing everything.
* Keep it simple. Less is more sometimes.
* The ol’ “Most of all, have fun” bullet-point.