<u>The Retirement System Calculator Project</u>

Project Overview

Our goal is to build an application for the Massachusetts State Retirement Board that will allow them to uphold their responsibility to administer the State Employees' Retirement System for all current and past state employees. More specifically, we will be building an application that allows employees to calculate the money in their monthly pension check. Our solution will enhance the current pension calculator available on the Retirement Website. If we are successful our new calculator will prove to be more user friendly and better address the needs of Massachusetts state employees.

Purpose of the Project

Client Information and Background

The client for this project is The Massachusetts State Retirement Board, an agency within the Department of the State Treasurer. They have voiced concern about the current state of their online pension calculator. The calculator requires the user to enter a significant quantity of data which is described using technical language and the user interface design has received little consideration. As a result, the calculator is difficult to use. Analytics reveal that many users open the calculator only to close it shortly thereafter.

Furthermore, the Retirement Board is unhappy with the state of the code that powers the calculator. It has gradually accreted over time in response to changing rules and regulations. This has led to a large amount of technical debt. Much logic is duplicated between two different versions of the calculator. The implementation is difficult to extend, poorly tested, and lacking in documentation.

Some of the improvements the client would like to see are:

- Update of the user interface
- Include instructions within the calculator instead of on a different page
- Combine two current calculators that operate based on separate dates
- Document the current code and make it more modularized
- Retrieve employee data directly from the database

Goal of Project

The goal of the project is to modernize the retirement estimate calculator. There are various sub-goals to achieve this, including combining the two present calculators into one, and making it more intuitive to fill out the calculator. A stretch goal for this project is allowing employees to use their exact employee data to figure out their retirement.

How will we know if we are successful?

We will know if we are successful if we emerge from the project with a single, intuitive calculator for employees to use to help calculate their retirement estimates. Analytics should validate that our work has improved upon the old system. A bonus to completing this goal would be to create a calculator that employees can log in and use their actual employee data to calculate a more accurate retirement estimate.

Scope of Work

Current Implementation

There is a current retirement estimate calculator that employees can use. However, it is actually split into two calculators, based on whether or not you started working before or after April 2nd, 2012. These existing calculators can be found at the following two links: http://www.mass.gov/treasury/retirement/retirementestimator/estimate-before-04-02-2012.html and http://www.mass.gov/treasury/retirement/retirementestimator/estimate-after-04-02-2012.html . One thing to note about these calculators is that they are simply estimates based on certain criteria filled out in the calculator form. The current calculators do not use specific employee data. Additionally, if an employee has started before 2012, and then again after, there is no way to combine the two calculators or their output.

Context of Work

The state of the calculator affects many people; it is one of the most-accessed pages on mass.gov. We expect prospective, active, and retiring state employees will be the users interacting with our calculator. They currently use the two calculators listed on the retirement website. We will have to integrate and improve upon the two calculators. The calculators were written in JavaScript, but we have little other information about the development process they went through. Therefore, we cannot yet determine whether to continue using the same development environment or choose a new one.

Sample Scenario

Combined Pension Calculator: A user will access our calculator when they wish to obtain an estimate of their retirement benefits. They may be a retiring state employee who would like to see a relatively accurate picture of what they have accrued. On the other hand, it might also be a prospective employee looking for a rough estimate to compare to other retirement packages.

The calculator will prompt the user for employment data and provide access to clear descriptions indicating what this data is and how to obtain it. The user will then enter the relevant data and submit it. At this point, the calculator will either display the projected retirement benefits or enter an error state, requesting that more information be provided in the correct format. The projected retirement benefits should be informative and easy to understand.

If possible, active state employees will be able to authenticate themselves and the calculator will automatically populate its fields with employee data from the client's database.

In this case, the user will only have to enter login information and their projected date of retirement. Then the calculator will display their pension information. However, the implementation of this feature will require some support that the client may be unable to provide. In any event, we will make the form to fill out information as user friendly as possible whether or not data is pulled from a database.

Stakeholders

1. **User Category: State Workers**
    - Role: These people will be the primary users of the retirement calculator. Their role will be using their data as an employee to determine pension earnings, etc.
    - Technical Experience: Employees will have a wide range of technical experience, depending on their field. This could range from an IT personnel to a state janitor with little technical experience.
2. **User Category: Massachusetts State Retirement Board**
    - Role: The retirement estimate calculator is a service offered by the MSRB, and their office fields specific questions about retirement estimates as well.
    - Technical Experience: The employees of the MSRB use this calculator, and should already have experience utilizing the existing one.
3. **User Category: MSRB Technical Department**
    - Role: The MSRB technical department maintains services offered by the MSRB.
    - Technical Experience: The employees of the MSRB maintain the existing calculator and other services. They should have high skill levels with technology.
    - Other Notes: The MSRB technology team will need to maintain this calculator at the conclusion of the project.