Retirement Calculator Project Technology Usage Proposal

Team 304

October 19, 2017

Frontend Technology

For the frontend of the calculator, we plan to use angular js. Angular js is a javascript framework which excels at creating static documents. We chose Angular js for two main reasons: the first is that it is easily extendable and the second is that it will handle a lot of the workload for us.

At a basic level, we will be using Angular js to create a form and a results page. However, the form can have several different views depending on what the user wants to find out. Using angular js, we can easily handle that rendering logic.

In later version of our product, we want to be able to pull some, if not all, the data from a pre-existing database. In order to do this, we need to make sure the user is authenticated. However, since there's also a non-authenticated workflow for this site, we need to be able to differentiate and handle both flows. Using Angular js, we can easily handle authorized and non-authorized workflows via the secure and non-secure routes.

We will send and receive data from an exposed API created by our backend.

Backend Technology

In order to implement the backend to the calculator we plan to use Java Enterprise Edition (Java EE). Java EE is an exceedingly mature technology, with a wealth of resources and compatible software available. Furthermore, in this case specifically, preexisting technology related to the course is set up for Java which will reduce the overhead from technology choice. That preexisting technology

is Jenkins and JBoss, a CI solution and an application server. We will be using Jenkins to manage builds and testing, and JBoss to host our application.

The backend project will be structured as some number of Java servlets, the business logic, and code to connect to the database. To connect to the database we will use a JDBC driver for PostgreSQL. We will use Maven to build the project.

Database

In order to provide the database needed for development of the calculator we will use PostgreSQL on AWS. These technologies are all mature and very powerful, and specifically chosen (from among similar technologies) because of previous experience on the team in using them. That previous experience will allow us to deliver more value to the client (as dicussed in the Backend Technology section) by minimizing startup costs.