Requirements Documents

By the Brokers

Goals = Encourage savings by comparing reality to their goals

* Calculate current annual interest rate based on past investments (Chen)
* Record current investments (Chen)
* Register User (Dayu)
* Graph Investments based on actual interest per year (from Chen’s calcs) vs idea interest per year from registration page (Alex)
* Show savings total amount at retirement (Alex)
* Show Goals Entered By User (Alex)
* Show savings total at death (Alex)

Assumptions

* Create a hosted web page
* Retirement Age, saving total per year, income total per year, current age, current investments, ideal annual interest, given by user
* Inflation is 4% annually
* Retirement Expenses = Income per year – savings per year
* Thrivent Financial Income Funds only used in investments (<https://service.thrivent.com/apps/investments/Mutual/daily.jsp>)
* Use Google Finance for current price <http://finance.google.com/finance/info?client=ig&q=NSE:HSTRX>
* User gives initial price, date
* Death at 80
* Retirement age give by user
* Longterm storage in MongoDB
* Browser session storage is allowed (no Local Storage)
* Someone already has at least one investment for one year

Requirements

1. Registration (Dayu)
   1. Collect the following info
      1. Username
      2. Password
      3. Current Age
      4. Retirement Age
      5. Ideal annual interest rate
      6. Annual Income
      7. Annual savings
2. Login
   1. Lookup user and password combination
   2. Allow access to main page if correct credentials
   3. Warn if incorrect credentials
   4. Allow for password change
3. Investment Calculator Controller (Chen)
   1. Quote
      1. Input = User gives symbol (dropdown menu)
      2. Output = Page shows current price and fund name
   2. Actual Investment Calculation
      1. Input = from Registration
         1. number of shares
         2. Symbol
         3. date bought
         4. purchase price per share
      2. Output (for actual)
         1. Total savings amount (current)
         2. Calculate interest per year (actual)
         3. Calculate total saved per year until death
         4. Calculate total
   3. Ideal Investment Calculation
      1. Input = from Registration
         1. Total current savings (from Actual investments)
         2. Ideal interest per year (from registration)
      2. Output (for ideal)
         1. Total savings amount (current)
         2. Calculate total saved per year until death
         3. Calculate total
4. Graph Page (Alex)
   1. Actual Savings
      1. Input
         1. Retirement Age (from registration)
         2. Current age (from registration)
         3. savings per year (for before retirement)
         4. expenses per year (for after retirement) (from registration)
         5. Total amount invested (from Investment Calculator)
         6. actual interest rate per year (from Investment Calculator)
      2. Output = Output
         1. Total savings at retirement
         2. Total savings at death
         3. graph of savings to retirement and death
   2. Ideal savings
      1. Input
         1. Retirement Age
         2. Current age
         3. savings per year (for before retirement)
         4. expenses per year (for after retirement) (from registration)
         5. Total amount invested (from Investment Calculator)
         6. ideal interest rate per year (from registration)
      2. Output
         1. Total savings at retirement
         2. Total savings at death
         3. graph of savings to retirement and death

Justifications

* Barons - http://www.barrons.com/articles/top-mutual-fund-families-1454736588