**Description of Android App** (What the app does / why you thought this app was necessary/who it was targeted to (some basic marketing))

Our app targets individuals whom are interested in learning how to manage their financial portfolio but lack the experience or dedication to research and assess the stock or bond markets. Designed to consider the user’s age, financial capital, family size, and willingness for risk. Our app calculates the “safest” investment plan based on the given user information. We define “safest” as the investment option that yields the highest net profit for the amount of uncertainty that the user is willing to risk. Searching through the databases for stocks and bonds, our app finds the best returns for the amount of risk that the user is willing to take. These returns are then narrowed by demographic based on the age and amount of money the user is willing to invest. The optimal plan given to the user will be a mix of stocks and bonds that are predicted to yield most profit based on the submitted information.

**Front End:**

Front End can be broken down into a few steps:

1. App launches and there is a ‘4 second’ waiting time for it to launch to the login activity
2. Login Activity – takes in user’s username and password and gives them an option to sign in. Error checks in place in case Password is too short or fake email address.
3. InitialQuestions Activity – takes in a person’s family size, income and age to calculate risk factor so that they know where they stand financially
4. Chart Activity Java – Outputs a chart based analysis on your possible financial portfolio and breaks it down into stocks and bonds
5. (Next possible step that were about to implement but couldn’t get to it because we ran into problems with “Google Play SDK’s” after repeated attempts. This final step basically suggests the neatest possible investment centers in Boston based off of your risk profile and stock-bond suggestions. We REALLY wanted to get this step but we ran into a couple problems:
6. We tried using the Google Places API to track the “financial” places but it was recently deprecated and we couldn’t get self-made markers placed with our app on time
7. Kept running into problems with google maps SDK and emulator would keep quoting despite downloading all the supporting libraries. However, we are happy to have our app functioning the way it does as right now it outputs key data for further processing such as risk rate as well as stock-bond percentages.

**Back End**

Back End explained –

1. Risk is calculated from a financial equation that correlates income levels, age and family size
2. An important thing that should be understood that may not work fully with our output chart is the generating function chart according to age. We ran into troubles with “intent” and “bundle” when we linked the input of one android activity to the internal processing of the chart creating chart activity. We had NO compilation errors and our app DOES NOT crash but we don’t necessarily have a dynamically changing chart according to input values of age.