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Software Development I

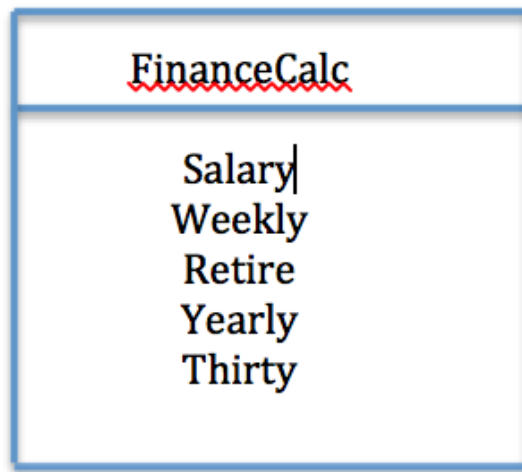
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### Finance Calculator

Abstract: This write up describes the functionality of the final program. This is a java code that allows a user to input his or her salary for the year after taxes and returns information to the user. The information returned ranges from how much money he or she should save weekly to how much he or she could have thirty years from the day they input the salary.

In the wake of the financial market crash in 2007, many people were left questioning the reliability of the stock market. People lost hundreds or even thousands of dollars intended to support them well into their retirement age. While many people lost money in the stock market, many people do not know how to save money on their own for retirement without the help of a financial advisor, or someone aiding them with their 401k. The aim of this program is to allow a person to enter in the amount of money after taxes he or she makes per year, and have it broken down into saving options for people. The program has one class with five different variables in order to take the user's input and return accurate results. The entire program is enclosed within a while loop to allow the user to input a salary until he or she does it correctly. After the loop there is a try catch statement, which the rest of the code is enclosed in to prevent the user from entering a character into a double. It prompts the user until a correct input is given. There is then an if else statement to make sure that the user inputs a positive number because it

is possible to lose money, but it is not realistic to have a negative income. There is then another if statement to return the correct weekly saving percent to the user based on their income. Below that is the rest of the code, which is simply returning the calculated values to the user. The UML diagram is below.



The program is not difficult to understand. The purpose of the program is to make is easier for people who may not be well informed on how to save money, and how to tailor those savings to themselves personally, without the hassle of banks and other financial advisors trying to make commission. The way the program works is through allowing users to tailor the experience to their own needs. The program prompts the user to enter their salary for the year. It then divides that number into an income per week. The program then allows the user to enter in how much of their money that they are putting into a savings account and it returns to the user a statement of whether or not the person should be saving more, less, or is saving the correct amount. The program is also able to tell the user what their projected savings will be at a fixed date of thirty years. The object of the program is to allow people to have easy access to information surrounding

their retirement and give a rough estimate of how they will be financially in the future.

The program also aims to inform people the rate of money they should be saving surrounding the amount of money they are currently making. The purpose of this is to inform people who may not necessarily know their current income, an estimate of how much money they should be saving with a number that can be applied to the income without inputting it into the program.

The program does not require any special requirements. It is a java program that can be executed from the command line, allowing the user to input information there and receive a response back. A computer and some basic knowledge of how to run a java program are required. However, if the program was to ever be published, the best way to execute it would most likely be through html and create a calculator that could be executed through the internet simply because it would be more user friendly.

Retirement is something that concerns everyone at some point in his or her life. The worry of having enough money to retire has crossed every adult's mind at some point in time. Due to the weight of the matter, there are already some calculators that aim to help people figure out how to prepare for a comfortable retirement. However, many banks make these calculators as subtle advertisements, and when income information is entered, they redirect the user to a page to figure out which savings account would be best for the client at their bank, and does not actually return any real information to the user. As a result, people do not have access to basic information that is essential for the future of the user. This program is strictly to help people save money and will return the information to the user right away. Also, a new feature is the weekly breakdown of the income for the user to see. Most banks do not find this piece of information to be relevant

enough to include in their own calculators because it does not provide an opportunity for an advertisement.

The program is easy to use, but there still is a chance for user error. For example, a person cannot have a negative income. It is possible for a person to be unemployed and spending money, which would cause a person to lose money, but it would not technically be a negative income. If a person were unemployed, their income would be 0, and not negative. An error that could occur if a user attempted to enter a negative income, or if a user attempted to enter a letter instead of a number when prompted. If the user tries to enter in a negative number, the user receives a message informing him or her to reenter a positive integer and then re asks for the yearly income using a loop and if else statement. The same occurs if a user tries to enter a letter using a try/ catch statement. Another error that could arise from the user is if they do not know their income. The user is required to know their income in order to receive correct feedback from the program; otherwise the information returned will be inaccurate. It is possible for the user to receive an estimate if they have a slight idea of the income.

The purpose of the program is to make information about retirement and saving money easier to get for people without the hassle of banks and advertisements. Many people do not have access to resources that will easily supply them with this information. The program makes it easier for people to be able to have their information and allow them to better prepare for their future. Overall, it allows people to be informed about a topic critical to their life and tailor it to their exact needs without being too difficult to understand. It also provides an alternative to investments in the stock market and allowing for some financial stability with ease.