Project Title \_\_\_\_\_\_\_\_Finance App-Stocks\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Student 2 Name \_\_\_Sylwia Bielinska\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID Number \_\_19374573\_\_\_\_\_\_\_\_\_

Staff member Consulted for supervision \_\_\_\_\_\_\_\_\_\_Mark Roantree\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Introduction

This project will be based on a finance app. This app will Create a finance app that will store any selected financial stock that the user wants to keep track of, e.g. they want to be update on the stock "bitcoin". This app will deliver a product to financial users hoping to keep up-to-date with their stock.

# Outline

The app will send notifications to their phone if the price is fluctuating a lot, either up or down. You can get this sort of financial information from yahoo in python, every hour or two the app will check the current price of the stock with the previous price of the stock. If there is a change the user will be sent a notification to either the app or yahoo. It will also send notifications to the users phone if there is a major news story on that stock. For example it will query google search and specifically the news section. Here it will get any new articles that have reached the top of the web search that have not already been sent to the user. It will then send a notification to the user with a clickable link to the website. A pristine user interface will have to be created allowing the user to select its stock, which will come from databases, so obviously not all stocks can be accessed. Also clear and presentable notifications sent to the users home screen will have to be implemented, which will grab the users attention. These notifications should come across as not too verbose but also ensure that the user who see’s it knows exactly what sort of message the notification is trying to send. A limit on the amount of stocks that a user can choose to keep track of will be established. The quantity will be further elaborated on once the app is playtested and tinkered with.

# Background

With the rise of crypto-currencies and people wanting to invest into the stock-market in general this app is very relevant in today's world. This lead us into the thought process of creating a financial app to keep track of any selected stocks that the user chooses.

# Goals

The practicality of this app is enormous in terms of people’s economic standing. Some people invest thousands, even hundreds of thousands into

the stock market, so an app that can relay information in a swift manner to a financial user could save substantial amounts of money.

# Programming language

The majority of this app will be coded in the programming language python, as both members are most familiar with it.

## Programming tool(s)

The main programming tool that will be used is visual studio code, which will be the home for the implementation of the code in python. It is a code editor that supports the use of python among other languages.

Another programming tool that will be used is pip. This will be used through the terminal in mac. Its main use will be the installation of various libraries that are needed such as yfinancelibary which will retrieve stock information. Also it will be used to install the google library which will be used to search for any news updates regarding the stock.

Another programming tool which can be used, which might not be needed is beautiful soup. This is very useful when it comes to webscraping in python and might be seen in the code if it is needed.

## Division of Work

*Sylwia-* Will mainly be involved in the front-end side of the app. She will ensure that the user is presented with a pristine clean interface to work with. This is vital as a wonky interface can confuse the user and lead to more user error then is necessary.

The user interface will consist of selection of stocks, and a library of stocks that the user wants to keep track of as well as a removal option for each stock. The aesthetic of the notifications that are sent to the user will fall under Sylwia’s workload. The logo of the app will also be under her guidance as well as the main screen and the overall navigation of the app.

*Brian –* Will do the majority of the back-end work of the app. He will do the coding implementation of the app regarding selecting stocks from databases, the retrieval of stock prices every hour, as well as checking for news articles based around the stock or stocks that the user has selected. Sending notifications to the user will also have to be fulfilled by him. The

code to ensure that the graphical interface that Sylwia will be supplying functions the way it is meant to will also have to be carried out by him.

If at any point one member of the team feels a changing of roles is better suited for them, or they feel they can implement a certain part that the other member is implementing it will be noted.