Currency Exchange Notifier: Finding the right time to exchange currency
Initial Plan

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Project Description

The foreign exchange market is so unpredictable. The values of currency exchange rate fluctuate every day, making it rather hard to decide when to exchange the currency. Currency exchange rate fluctuations are affected by political news, economics, world-wide affairs and many other external factors. Especially with current political problems such as Brexit and COVID-19 it makes the currency fluctuations even more unforeseeable. The fluctuation of currencies increases the chance of financial loss and volatility in funding if you are relying on a foreign currency. As an international student who exchanges currencies regularly, I often face problems regarding fluctuating exchange rates. According to statistics in 2020, 20.7% of the students in the UK universities were international students [1]. This means that more than 1/5 of university students in the UK could potentially experience the same problem I have.

The fluctuation of currency exchange rates causes the difference in the money you receive in the end. For example, I exchange money from South Korean Won (KRW) to Great British Pound Sterling (GBP). 2 months ago, a pound was equivalent to 1552 KRW but today it is equivalent to 1625 KRW. This is a 4.7% increase in the value of GBP. Which means if money was exchanged from Korean won to pounds now, the resulting money would be 4.7% less than what it would've been if it was exchanged back in December. This percentage value may be negligible if a small amount of money was exchanged, but the bigger the amount is the more critical the impact would be. To avoid losing money due to the fluctuating currency rates, users must exchange their money when the currency value drops. This can be done by monitoring the exchange rates regularly. However, checking currency values every day can be time consuming and rather boring. The ideal situation would be letting the users know when currency drops, without making them check every day. In this project I am aiming to design a prototype that gives users notifications when a certain currency drops by a certain rate, or drops below a certain amount, so that people are able to exchange money at the best rate. Once the solution is discovered it is not only useful for international students; it

can also help people who work overseas, organisations that involve international trades and even people who are planning on going on holiday.

Project Aims and Objectives

The overall aim for this project is to help the user trade their currency at the best rate, by creating a prototype of a mobile application that notifies the users when a currency drops below a certain point. This mobile application will be an Android platform application which will be developed using Java and XML. Furthermore an API will be used to obtain the real time currency data from the web.

Objectives:

- To gain an understanding of the currency fluctuations and existing solutions
  - Observe the fluctuation and its impact
  - Research existing solutions and find out their limitations
  - Identify potential users

- To implement features based on the user's needs
  - The user should be able to select the currency they want to get notification for
  - The user should be able to set the value of the currency they want to get notification for (For example, if £100 = $135.92 today, the user might want to be notified when £100 = $132.00 or below. The user should be able to set a value they want)
  - The user should be able to set their default currency so they can see the relative values of other currencies

- To implement a suitable UX design
  - Clear and conventional design of buttons and icons
  - System that is easy to use regardless of the user's technical skills
  - Self-descriptive and consistent design

Work Plan

Meeting with the supervisor will be taking place every two weeks, 11:00 on Tuesdays. This is to review my progress and discuss the direction of the project. Urgent meetings can be arranged by emails if necessary.

Week 1 – 31st January

- Develop an initial plan

- Initial meeting with supervisor and set up future meetings

Week 2 – 7th February

- Prepare for ethics application
- Research Android app development courses and tutorials online to gain knowledge on development of the project
- **Deliverable:** Submit initial plan (7/2/2022)
- **Milestone:** Submit ethics application

Week 3 – 14th February

- Literature review
- Background research on existing solutions
- Continue research on app development and familiarise myself to the software
- Meeting with supervisor
- Write up literature review section for the report

Week 4 – 21st February

- Continue research on app development and decide which tools will be used for this project
- Research on currency data API
- **Milestone:** Begin implementing the primary functions of the prototype

Week 5 – 28th February

- Select and a suitable API to get the currency data
- Continue implementing using the selected API
- Meeting with supervisor to review progress

Week 6 – 7th March

- Write up the user test cases
- **Milestone:** An initial prototype should be functioning

Week 7 – 14th March

- Apply UX/UI designs and justify the selected designs
- Meeting with supervisor

Week 8 – 21st March

- Continue developing the program with final requisites
- Write up the implementation section on the report

Week 9 – 28th March

- Review prototype

- Meeting with supervisor to review the progress
- **Milestone:** Complete software development

Easter Break

- Grace period for any undone work

Week 10 – 25th April

- Test and evaluate the application based on test cases
- Carry out user testing
- Write up evaluation section on the report
- Meeting with supervisor

Week 11 – 2nd May

- Write up future work and conclusions on the report
- **Milestone:** finish writing up the report

Week 12 – 9th May

- Proofread the final report
- **Milestone:** Complete the report
- **Deliverable:** submit final report and source code (13/5/2022)

References

[1] UUKI Publications, 2021, International Facts and Figures 2020, Retrieved 9 Jan 2022 from https://www.universitiesuk.ac.uk/universities-uk-international/insights-and-publications/uuki-publications/international-facts-and-figures-2020