**IMPROVE CURRENCY CONVERTER USING API**

A Project Improvement

Proposal in Information Technology 3

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science in Information Technology

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**Introduction**

Our organization currently faces challenges with our existing currency converter tool, including outdated exchange rate data and limited currency coverage, impacting the efficiency and accuracy of international transactions. To address these issues, we plan to enhance our currency conversion capabilities by integrating an Application Programming Interface (API) solution. This upgrade aims to provide real-time exchange rate data from reputable sources, expand currency coverage, and improve the user experience. By doing so, we aim to streamline transactions, minimize errors, and enhance customer satisfaction, ultimately strengthening our competitive position in the global marketplace.

**Current Analysis**

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The current processes within the project are indeed simple and basic, as illustrated by the straightforward flowchart where users input their desired amount of money and select the currency for conversion. However, there exist numerous opportunities for enhancement within the project. One avenue for improvement involves implementing a button switch currency feature, which would provide users with greater flexibility and convenience in selecting currencies. Additionally, enhancing the user interface (UI) design can significantly enhance the overall user experience, making the currency converter tool more intuitive and visually appealing.

**Proposed Improvement**

Integrate real-time currency rate updates from a trusted API to assure accurate conversions, allowing users to convert between multiple currencies effortlessly. Adding a user-friendly interface and simple design components could enhance the user experience, making the process of currency conversion more seamless and efficient. Apply error handling to avoid incorrect conversions.

**Benefits and Impact**

**Improved User Experience:** Having a user-friendly interface and simple design elements improves the overall user experience. Users will find it easier to utilize the currency converter, resulting in higher satisfaction and engagement.

**Effortless Conversion:** With accurate real-time updates, users may easily convert between multiple currencies. This improves the converting process and saves consumers time and effort.

**Increased Efficiency:** A conversion procedure allows users to immediately acquire the correct currency conversion without any difficulty or confusion. This efficiency may increase user engagement as well as satisfaction.

**Reduced Errors:** Using error handling techniques helps to avoid incorrect conversions, ensuring accuracy of data and user confidence. Users can be aware that their conversions are accurate and dependable, that's boosts confidence in the currency converter service.

**Project Plan & Timeline -D**

**Week 1: Planning and Setup**

Gather necessary resources such as API documentation and design assets. Set up development environment, including installing necessary software tools and frameworks.

**Week 2: Implementation of Real-Time Updates and User Interface Enhancement**

Research and select a reliable API for real-time currency rate updates. Integrate the API into the application. Implement functionality to fetch and display real-time exchange rates within the application's user interface. Begin user interface enhancements, focusing on improving design components for a more user-friendly experience.

**Week 3: Error Handling & Testing**

Implement error handling techniques to ensure accuracy of data and prevent improper conversions. Conduct thorough testing of the application, integration tests to identify and fix any bugs or issues.

**Week 4: Finalize and Deploy**

Based on test input, finalize any remaining enhancements or adjustments. Create documentation, including user guides to help users and developers learn how to use the currency converter.

**Evaluation & Risk Assessment**

The success of the project will be gauged through metrics such as user engagement, satisfaction, conversion accuracy, and error rates. Data collection methods include analytics tools, user feedback forms, real-time exchange rate comparison, and error logging. Risks associated with the project include technical challenges, data security risks, API downtime, and user adoption issues. Mitigation strategies involve thorough testing and validation, robust data security measures, contingency plans for API downtime, and user involvement in the development process. By proactively addressing these risks and measuring success through defined metrics, we aim to deliver an enhanced currency converter tool that meets user needs and ensures reliability and efficiency.

**Conclusion**

In conclusion, the proposed enhancements to our currency converter project present a significant opportunity to improve both the functionality and user experience of our tool. By integrating real-time currency rate updates from a trusted API, implementing a button switch currency feature, and enhancing the user interface design, we aim to streamline the currency conversion process and provide users with a more efficient and intuitive tool. Additionally, the incorporation of error handling techniques ensures the accuracy of conversions, enhancing user confidence in the reliability of our service. Through careful planning and execution outlined in the project plan, we anticipate achieving these improvements within the specified timeline. Ultimately, these enhancements will not only benefit our users by providing them with a more seamless conversion experience but also contribute to the overall success and competitiveness of our organization in the global marketplace.