# Abstract:

This project, titled "UPI Reward System using Queue Data Structure," introduces a sophisticated rewards mechanism within the Unified Payments Interface (UPI) domain. The implementation incorporates a Queue Data Structure to efficiently manage reward distribution, ensuring fairness and timeliness. The testing phase utilized table data (Excel) to validate the model's functionality.

Key features of the project encompass the use of Python timestamp functionality to assess the expiration status of scratch cards, set at a six-month duration. The reward generation process within the system is facilitated by the randint() function, producing random values ranging from 0.01 to 0.1 percent of the transaction amount. Furthermore, the system supports continuous scratching for an interactive and engaging user experience.

The inclusion of UI/UX elements, including onclick variables, enhances the overall user interaction. These elements contribute to a seamless and intuitive interface, ensuring user-friendly navigation. The dynamic nature of the project is evident in its ability to continuously generate rewards and validate scratch cards, providing an enriched and responsive user experience.

In conclusion, this project not only introduces an optimized UPI Reward System with Queue Data Structure integration but also incorporates dynamic features such as timestamp-based scratch card expiration checks, dynamic reward generation, and interactive UI/UX elements. These combined elements contribute to a robust and engaging system that aligns with the evolving landscape of digital payment platforms.