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| **Project Proposal** | | |
| **Title :** | **CRYPTOCURRENCY E-WALLET** |  |
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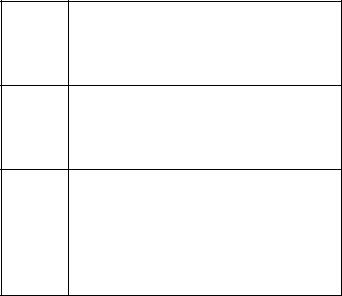
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|  | **INTRODUCTION** |
|  | The Industrial Revolution 4.0 brings the world towards a new era where cashless payments become a medium that be use widely. This cashless payment makes transacting more transparent and fast without any borders.  There are many companies out there that implement this method widely, especially from China. That's is the reason why mobile apps that provide cashless payments like AliPay, weChat and it became popular in that country. This payment method proved to be successful and accepted by the Chinese community.  These cashless trends do not stop there. This trend evolved from the use of money issued by a government to the use of a digital currency called cryptocurrency. The use of this digital currency is one of the efforts to empower the use of universal money while improving the weakness of fiat currency which centralized and controlled by the government. The use of blockchain technology as a mediation of transactions and public ledgers also contributed to the development of cashless wallet and decentralized environment.  In Malaysia, its influence has begun to be felt through the cryptocurrency wave that has begun to emerge since early 2017. Bitcoin has begun to be accepted as one of the means of payment and storage of valuable assets. From the influence of bitcoins that are the major currencies, it growing to new generation of coin which more efficient and fast technologies like Digibyte, Verge and more. They all have their own fans.  It has a slight influence on the people out there try to use cryptocurrency. This includes UUM Golf Club who are trying to implement e-wallet as their pilot projects in areas under the Golf Club management that use cryptocurrency as a payment. So, users have the option to make a payment using Malaysian ringgit or digital money. This led to development of decentralized payment system.  This project intends to investigate understand the existing payment system used UUM Golf Club and to develop a custom secured, convenient and reliable cryptocurrency wallet for UUM Golf Club an integrate it with Blockchain network as a new payment option for all local and foreign golf members.  To be able to accomplish this, cryptocurrency seems to be elegant digital currency and payment option without relying on third party to enable payment that is securely, and transparent. |
|  | **PREVIOUS WORK** |
|  | This is part of a study segment that discusses existing problems that occur and how the problem is resolved with the use of e-wallet. On the other hand, it can improve the operator's information, consumer protection and can plan strategies for potential customers for UUM Golf Club. Referring on previous work that has be doing on e-wallet environment, there is three research discussing on how we can build better cryptocurrency eco-system.  Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments (Nakamoto, S, 2008). Satoshi Nakamoto through his whitepaper *Bitcoin: A Peer-to-Peer Electronic Cash System* has explained that dependence on third parties in payment transactions has led to higher cost of trade. This led to Nakamoto's idea of ​​issuing third parties from payment arrangements by suggesting peer to peer (P2P) methods to users. This method proposes bitcoin as a form of payment and e-wallet as a medium of payment. This method has been proposed by Nakamoto without relying on trust with provides a strong control of ownership to users own money. The use of blockchain technology as a public ledger also solves the issue of trust by listing a publicly traded record of all transactions.  In term of security, the use of public key and private key is one of the forms of security that is implied in the cryptocurrency wallet (Loera, A., 2014). Even Anthony Loera in the pattern paper *Method of Making, Securing, and Using a Cryptocurrency Wallet* used the same system that normal e-wallet do but in printed version. The system is called the Tangible Cryptocurrency wallet that allows users to make transactions using printed materials. Users can use this wallet by print a paper-based QR Code that show users public key.  In another side on the regulation, Malaysia is moving towards a cashless society and preparation needs to be done (Zulhuda, S., & Sayuti, A., 2017). Discussion about regulation in the journal of *Whither Policing Cryptocurrency In Malaysia?* the Government needs to take a closer look and consider putting a clearer regulatory response to address and accommodate relevant aspects and risks while engaging an industrial self-regulatory mechanism. Know your customer ('KYC') is the best way to show a process of a business by identifying and verifying the identity of the wallet users. The term is also used to refer to the bank and anti-money laundering regulations which governs these activities. |
|  | **PROBLEM STATEMENT** |
|  | The emergence of Cryptocurrency has become this quandary phenomenon in Malaysia. There are many challenges faced by cryptocurrency since its first appearance in 2008. Since that year, there were some problems faced by cryptocurrency. Among them is the cryptocurrency ban by the government, issues of trust, privacy and technical issues. UUM Golf Club also has a problem that needs to be resolved. Among the cryptocurrency problems involving e-wallet and the problems faced by UUM golf clubs are as follows.  **3.1 Adhere to Government Policy**  Government policy requires that any financial affairs require users to provide their information. However, most e-wallets in the market fail to comply with the "Know Your Customer" policy is the process of a business identifying and verifying the identity of its clients. This also led to a barrier from the government to allow cryptocurrency to be used in Malaysia.  **3.2 Cryptocurrency exchange**  Problems occur when most cryptocurrency users have trouble converting cryptocurrency to fiat and vice versa, especially in Malaysia Ringgit. This slightly affects the desire of new users to use cryptocurrency as a medium of payment and assets. At the same time, it is difficult for those who generate financial resources through cryptocurrency such as miners and traders to convert their digital money to fiat money.  **3.3 Cryptocurrency platform is required at UUM Golf Club**  Year 2018 is the year when Malaysians will start dealing with the cashless society. The popularity of cryptocurrency contributes to the development of e-wallet technology and UUM Golf Club does not want to miss this trend. In addition, UUM Golf Club has some problems of transparency and the troublesome manual system. |
|  | **OBJECTIVES** |
|  | * + - 1. To develop a cryptocurrency e-wallet app for UUM Golf Club.       2. To develop e-wallet that implement “Know Your Customer” policy.       3. Become a cryptocurrency exchange between fiat money and digital money. |
|  | **PROJECT SCOPE** |
|  | This project is a pilot project to be implemented at UUM Golf Club. Consumers are customers who visit the golf club. This is involving payment of fees, service charges and golf package. Facilities are available through a deal that can be done through several types of local banks and transactions can be made for 5 types of coin that enable users to convert from fiat money to digital money. |
|  | **PROJECT SIGNIFICANCE** |
|  | There are several benefits from this project. One is that users can make payments using the selected cryptocurrency. They can use bitcoin as the main coin or use 4 other types of coins provided such as Verge, Ethereum, Digibyte and Iota. In addition, users also can convert their fiat money to digital money via this e-wallet.  This app is specially created for UUM Golf Club to provide a faster, more transparent and secure payment platform for all. In fact, users can make purchases in just a few seconds with simple tap or scans of their devices, minimizing the frustration of long checkout queues. |
|  | **METHODOLOGY** |
|  | To ensure that the development of the project can be carried out quickly and efficiently, we use agile as the preferred methodology with SCRUM framework.  They are three roles defined in Scrum which is the Scrum Master, the Product Owner, and the Team. As Scrum master, Azmir Shah is responsible for making the process run smoothly, removing obstacles that impact productivity, and for organizing and facilitating the critical meetings. Product owner need to provide the “single source of truth” for the Team regarding requirements and their planned order of implementation. As a part of scrum team do the hands-on work of developing and testing the product.  Scrum does not define just what form requirements are to take, but simply says that they are gathered into the Product Backlog, and referred to generically as “Product Backlog Items,” or “PBIs” for short. Given the time-boxed nature of a Sprint, we can also infer that each set should require significantly less time to implement than the duration of the Sprint.  Most Scrum projects borrow the “XP” (Extreme Programming) practice of describing a feature request as a “User Story,” although a minority uses the older concept of a “Use Case.” We will go with the majority view here and describe three reasonably-standard requirements artifacts found in Product Backlogs. |
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| **For Supervisor’s Approval** |

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| Project Supervisor’s Signature & Stamp |  | Date |

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| **For Lecturer’s Approval** |



Pass

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Pass with condition

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