DECENTRALIZATION MODEL FOR LOCAL COOPERATIVE SOCIETY OPERATIONS USING COMPUTER TECHNOLOGY

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Abstract

This paper examines the operations of local cooperative society scheme in our society and suggested how perfectness can be introduced through computer technology. The operations of local contribution are solely depending on a single person who is the coordinator. This makes the operations centralized and hence, the procedure for the operation stressful. Sometimes the coordinator may display an opportunistic behavior by diverting contributed money for personal use. This decentralization model eliminates the major role of the coordinator by given equal power to all the participants in decision making. In this model, all the money contributed by the participant is displayed on the dashboard, and the participant who is eligible to withdraw the money can cash out to his/her account. Eligibility is determined by an index given to each participant during the registration. This whole process makes the model transparent. Php programming language and mysql was used to design the system whereby all the participants can register on it before the commencement of contribution. The model can be used by an individual likewise a group of people.

Keyword: Local cooperative, Opportunistic behavior, Coordinator, Computer technology, Saving.

Introduction

Traditional co-operative society is an age long co-operative institution in Nigeria with different local names. Although the names given to this society varies according to the tribes, the operations are not different likewise the benefits and shortcomings.

Wikipedia defines cooperative as an autonomous association of person united voluntarily to meet their common economic, social and cultural needs and aspirations through joint-owned enterprise.

Traditional co-operative ('Ajo' in Yoruba, 'Adashi' in Hausas, 'Isusu' in Igbos,), is an act of people coming together to contribute money to meet their needs. These people come together with the spirit of trust and friendship to contribute certain amount of money from their income together for each of the members periodically.

Ajo is a sort of personal savings which an individual, through self denial and self discipline, removed periodically from their income. The period of this saving is based on the joint agreement of the members of the forum. It could be daily, weekly, monthly or any time of interest that must be jointly agreed upon by all the members.

Onafowokan (2013) in his paper concluded that cooperative societies help to inculcate a good saving habit among the participants and reduces their expenses on frivolous spending.

Due to the benefit of 'ajo', some people go into it as a full time business to earn daily living. This type of 'Ajo' may be a little different from the local cooperative of origin. This is because, this type of ajo has a coordinator, and people who contributed money here do not know each other.

There is no rotation of collection in this type of local cooperative. People collect contributed money based on the time an individual needs the money. This can be likening to saving money in the bank, a personal saving.

The ajo of origin has a coordinator which will be a member of the group. This coordinator may be the initiator, or an elderly one among them or anybody chosen by the members. All members in this group know themselves and there is rotation of collection.

Basically, there are four stages in this local cooperative. The first stage is the coming together of these like mind people to form a group. Second stage is determination of number of participants, amount to contribute and also the period of contribution. (At times this stage two can be done by the initiator but most of time this decision

may be subjected to changes). Stage three is picking of numbers. This number shows the position of an individual for the collection of contributed money. The fourth stage, which is the last stage, is the collection (contributed money). This stage marks the end of a season or round. The local cooperative can continue and the rotation begins again.

There are two methods or procedure for the operation of local cooperative. One method is an individual operating it as a business. An individual we convince and encourage people to save any amount with him/her. The term and conditions will be stated and an individual who can abide with the conditions can register. This method is a little advanced in operation than the second method where people of like mind come together and fix the modus operand.

One major feature of local cooperative, either of the two methods, is the centralization of operation. A centralized operation is subject to manipulation. In local cooperative, the coordinator can manipulate any of the stages mentioned above. A coordinator can alter the collector in the collection rotation, he/she may use the contributed money for personal interest such as using it as soft loan for people who are not contributing members or otherwise. To prevent this, local cooperative can be partially de-centralized by the involvement of computer technology.

The introduction of computer technology in 70's and it availability and affordability in 90's has immensely helped in solving the rigorous activities of mankind. Today, technology can be applied in virtually all facet of human endeavor to solve complexities of task with relative ease and achieve maximum productivity at faster rate.

Computer technology, as defined by Ian.J (2010), is a technology that instead of building a physical machine for an application, builds a logical or virtual machine. Computer technology is used to serve and connect people in the modern world (Tony, 2018).

The introduction of computer technology can partially decentralize the activities of local contribution hence, making every member equal. It can as well give chance to an individual to operate local contribution inform of personal serving without the direct involvement of the third party (banks).

The major difference between the traditional way in the operation of this contributory society and the proposed decentralization model is the introduction of computer technology which enables open operation and the removal of central role of the coordinator.

Literature review

Soji (2014) said, it is common, all over Nigeria to see small contributory savings schemes where market women contribute a daily portion of their trading profit to a collective. He highlighted the characteristics of these ajo groups which promote it work and possibly, lessons that can learn by corporate Nigeria from the ajo groups to ensure that as a group, they maintain high corporate governance standards

Wole (2020) described the four key principles that drives the thrift system as "Know", "Trust", "Pooling", "Cycle"

Based on the model, which assumed that members know and trust themselves to pool funds together for one another in a minimum of two cycles, and then it would appear more like each member is actually collecting term loans from the group on an "interest-free" arrangement (Wole, 2020).

Lara (2007) described how ajo works as the agreement among the group, what amount to save on a periodic basis (daily, weekly, bi-weekly, monthly, bi –monthly quarterly etc.) when this has been agreed. A coordinator is chosen to act as the administrator of the portfolio. According to Lara (2007), the coordinator is responsible for the Communication of the decisions made to all contributing members, Send reminders of contribution to all members and serve as the central point for information.

Gboyinwa (2018) Ajo can be done among colleagues in the office, traders, members of a community etc. A coordinator is usually chosen among contributors who administers the contributions and hands over the money to whoever is next in line.

Wealtharena(2018) said, The success of ajo (local contributory society) groups was based on their common values and beliefs which provide the harmony of interest that erases the probability of opportunistic behavior. Although, common values and beliefs go a long way in the success of ajo, that does not erase in complete, opportunistic behavior.

The introduction of computer technology into the module operand of ajo can savage opportunistic behavior of ajo coordinator by given power to every member of the society.

UKEssays(2018) highlighted some of the importance of computer technology as a means of helping business field in terms of speed, accuracy, communication and relevant so that business can grow and less expenditure.

Renz (2013) said computer technology makes business and other fields faster and easier and give better communication to all people.

Design

Figure 1 shows the design model. Contributor(s) can register on the system to make his or her periodic savings. Php programing language was used to design the system. The system has an interface where the user(s) can register. The system is designed to be used by an individual as a personal serving system and also by group of people as a contributry society. The design of this proposed system is to be used online. This makes the use of internet a necessity because it is a web based system. The figure2 below shows the flow chart of the proposed model.
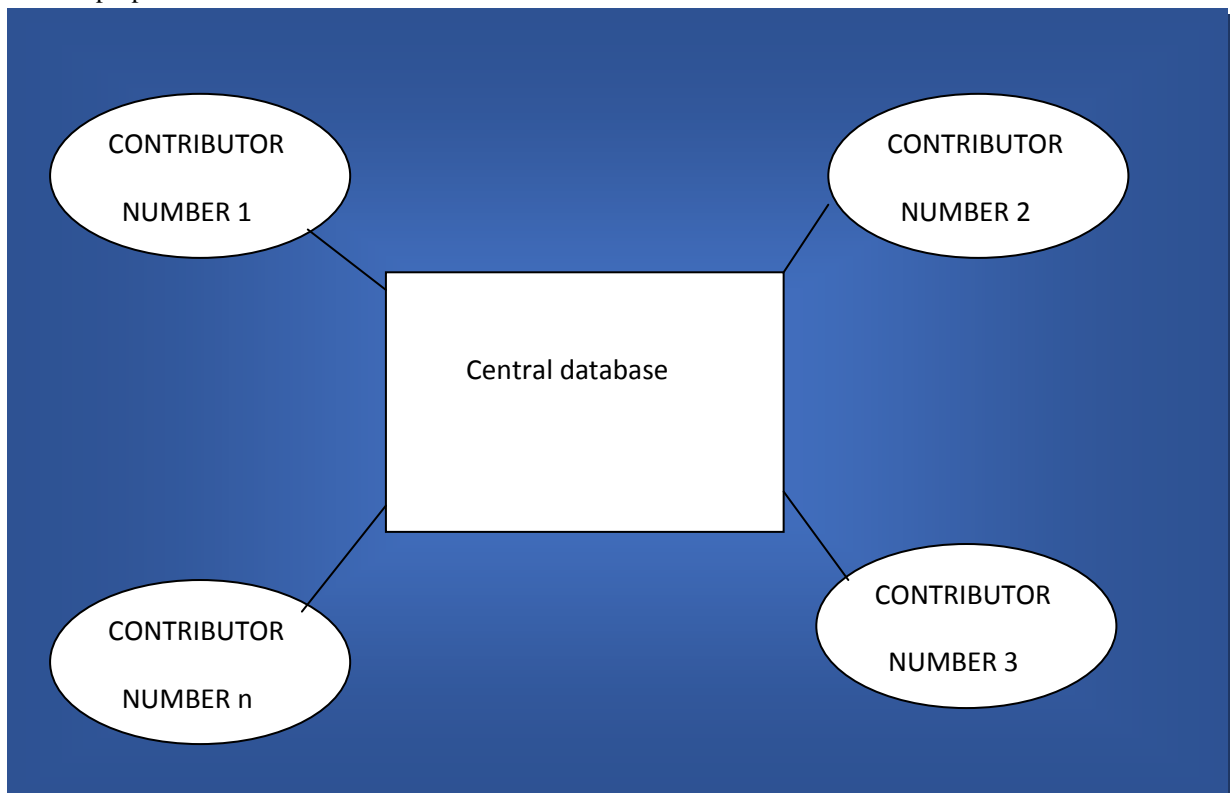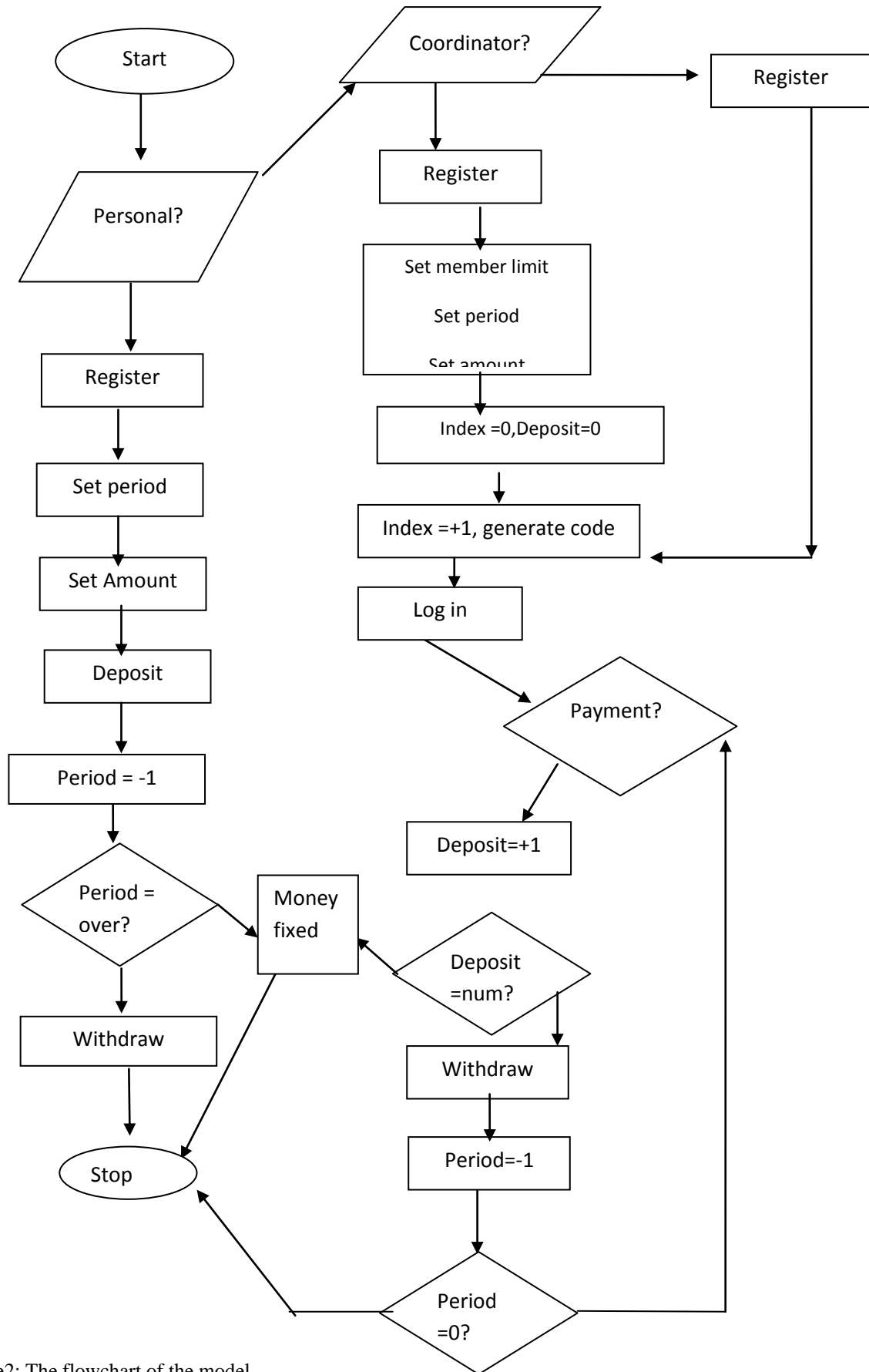

Figure 1: The design model

Figure2: The flowchart of the model

Implementation

The home page is the sign up page as shown in figure3 below, where a new user is expected to sign up. After a user signed up, the system take you back to login page (figure4) where the user will have to login using the details provided at the sign up page.
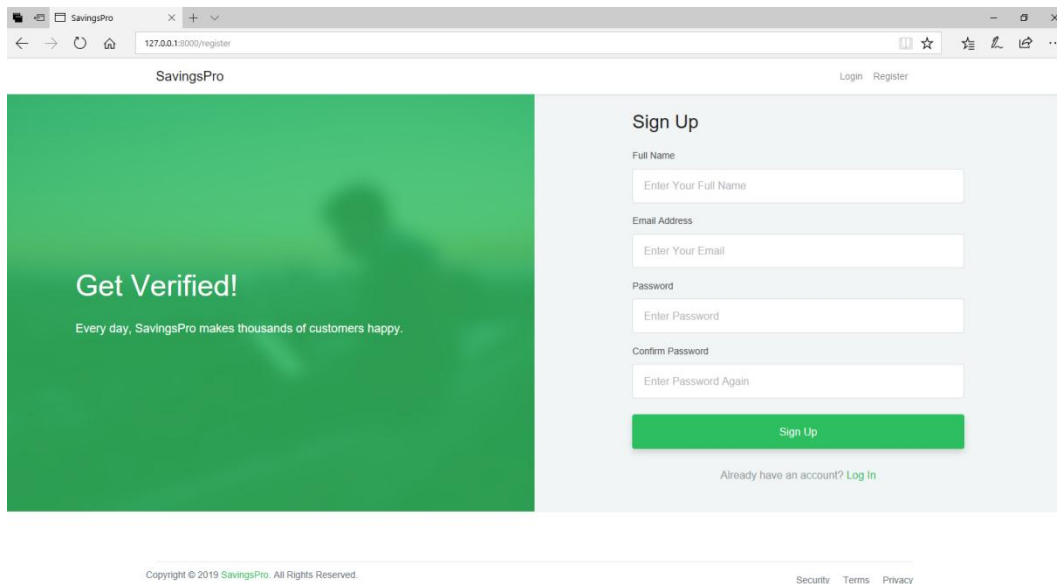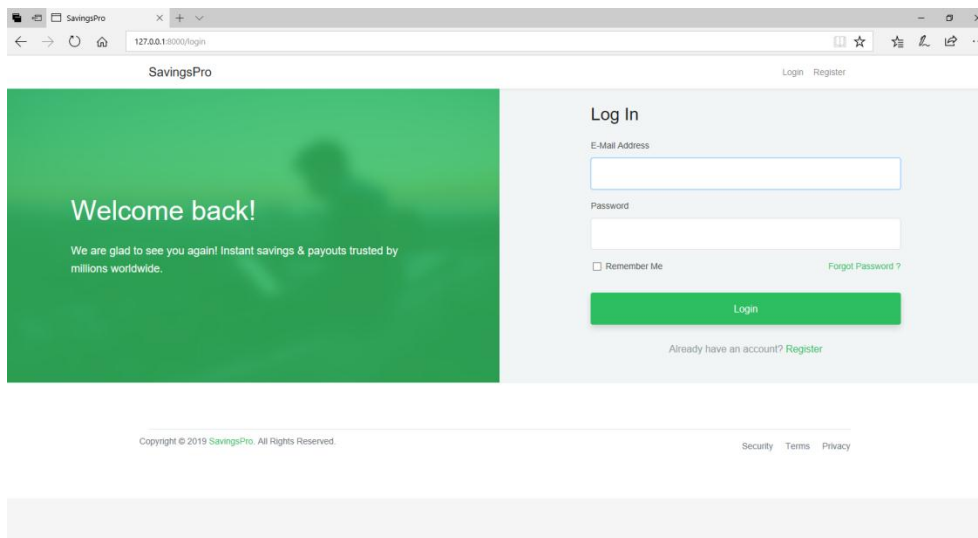

Figure 3: sign up page

Figure 4: login page

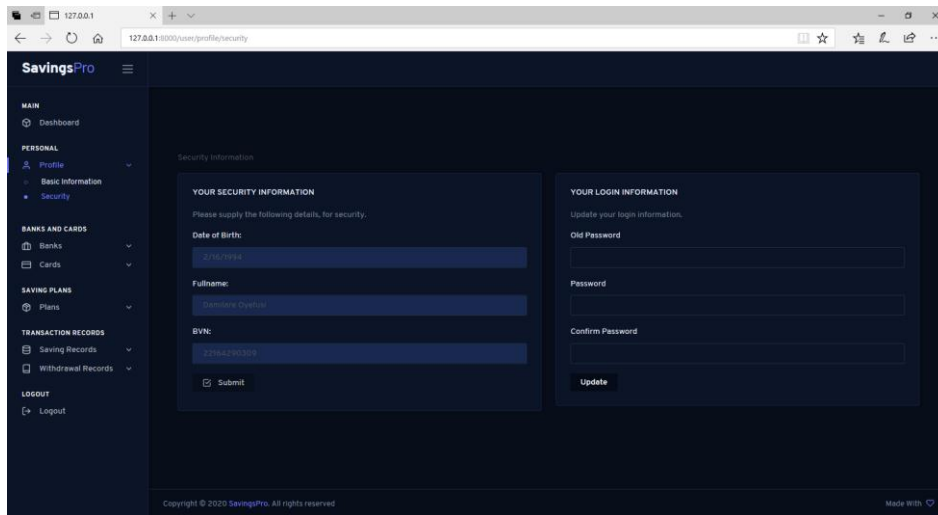When you login, you are directed to the registration page (figure5).

Figure 5: Registration page

After the registration, you are directed to the dashboard page (figure6) from where you can continue with the system.
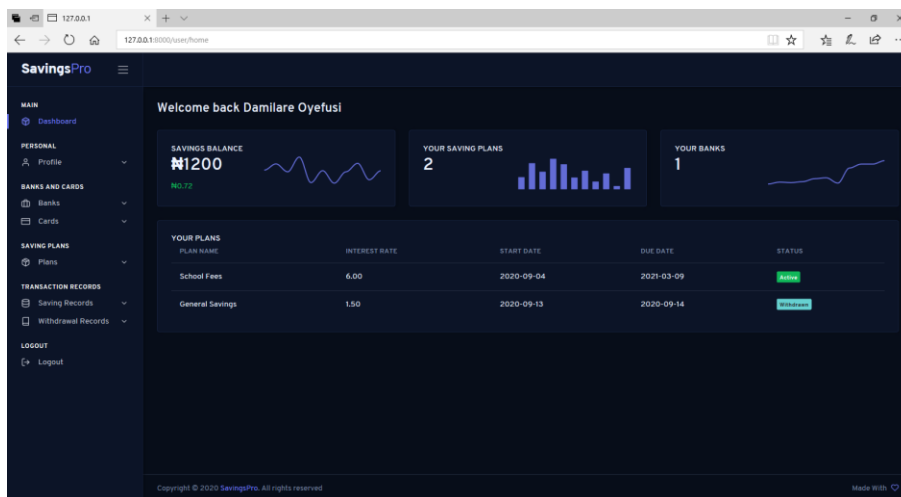

Figure 6: The system dashboard

One of the beauty of this decentralization model is the partial elimination of the central role of a coordinator because the system can perform most of the activities of the coordinator.

Registration for group usage is the only stage where the role of a coordinator is centralized. The coordinator will have to register for the group by opening an account on the system with unique user identification (user_id) which will serve as the name of the group. The system will generate a code which the coordinator will give to all the members. This code enables all members of the group to register and disallow non member from registering with the group. Some of the compulsory fields to be filed are surname and other name, bvn, bank details.

The system can as well make deduction from account of the members when the time of payment is due. It can compile the names of the defaulters for other member to view those that have not paid their contribution.

It has been the wish and desire of man, from the creation, to always look for a better way of doing things. This wish and desire always pushed man to search for a more convenient and reliable, more secured and profitable solution to his daily evolving problem or task. This model presented is believed to reduce, if not eliminate , the stress involved in local contribution either as a means for daily living (profession), or arrangement between group of people for the purpose of meeting their finances obligations.

This model does not eliminate failure of any member to contribute his/her periodic payment due to financial predicament or sickness or even death. Since the computer can not generate money, this model cannot produce solution to that problem. But the model will eliminate the interference of bank or any financial institution; eliminate privacy attached to contributed money as the total money contributed will be display on the dashboard, giving the entire member the access to see or view it (in the case of group contributor). Not this alone, it eliminates the stress of moving round to collect contribution by the coordinator.

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