**Design and Implementation of an application to manage “njangi”**

* User authentication and profile management
* Group creation – users can join or can be added. The user can
  + Add users
  + Add rules
  + Implement a contribution schedule – time for payment and the period
  + Set rotation management if and only if the min limit is reached
  + Set group limit, or min value
  + Choose the use for fines
* Contribution schedule
  + Set time limit
  + Lateness fine
  + Failure fine
  + Amount
* Payment tracking – time and monitoring those who have paid
  + Pending, paid or overdue
  + From user to system and from system to beneficiary
  + Business sims (MTN and Orange) for the system so it doesn’t incur any charges
* Reminders:
  + Email or SMS – push notifications too
* Rotation management – manual or automatic
  + Automatic rotation: users get a code privately and random numbers to choose form. The numbers won’t be visible to the group. So, no one knows when the others are receiving the money
  + For manual, they choose their positions in the forum, codes get generated and sent to them based on the positions. Just that everyone knows when
* Withdrawal: send to the beneficiary’s account
* Reports and analytics – those who paid, paid on time including fines and all. Generate reports based on the payments of that session, and at the end of the njangi, overall report
* SECURITY
* Money can be sent early. The system will register it and dispense on the day of the contribution

**Future update**

* Possibility to withdraw money from system to bank accounts?
* Sign contract with MTN for charges free transfer?
* Pay according to groups?

**Business strategy**

* Business sim
* A percentage of fines
* Initially will be freemium, then premium after the users have gained trust and learnt to depend on the application
* Monthly pay of 500
* Bimonthly pay of 2500frs each
* Yearly pay of 500frs
* Trial period of a month

**Security:**

* Id card, address, location plan emergency contacts (2)
* Upload a half card, and one with you holding your id
* You can’t play for the next person if you haven’t played for the previous person
* User account cannot be deleted, if they’re in any active njangi, they’re have overdue payments

**Objectives:**

* Automate and save time wasted in following up procedures, reminders, etc. in ‘njangi’
* Efficient contribution management – by monitoring contributions and setting standard rules for contributions to follow alongside reminders
* Ensure security and data privacy both for users and their financial transactions online
* Enhance transparency and accountability by providing clear visibility into financial transaction, contributions, rotation and sharing

**Requirement definition**

**Functional Requirements:**

* System must be able to allow the creation and management of njangi groups
* System must allow users to create and manage accounts
* Users must be able to join and be added to njangi groups
* System must be able to generate and manage reports (financial and users)
* System should be able to manage financial transactions
* The njangi admin must be able to set and manage njangi rules and protocols (contribution schedule, min and max users, etc.)
* System should be able to generate private and unique security codes for financial transactions
* System should be able to send reminders and notifications

**Non-functional**

* Security: system, users, finances and all transactions must be secured from unauthorized access and only for users with appropriate permissions
* Performance: System must be able to handle a required number of users without a degradation in the performance
* Scalability: must be able to scale up and down as needed
* Availability: must always be available at any time t when needed
* Maintenance: should be easy to maintain and update
* Portability: should run on different platforms with little to no changes
* Compliance: must comply with all applicable laws and regulations
* Reliability: must be trustworthy and reliable, and meet the user requirements
* Usability: must be easy to use and understand

**Existing systems:**

* No existing system in Cameroon as of now, but there are initiatives:
* The Njangi Project led by the Institute for Economic Development aims to develop a platform for this
* The Cameroon Ministry of the Digital Economic has expressed interest in promoting digital solutions for this

**Gantt Chart**

