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UNIVERSITY OF GHANA

SCHOOL OF ENGINEERING SCIENCES

COMPUTER ENGINEERING DEPARTMENT

CPEN 207: INTRO. SOFTWARE ENGINEERING

PROJECT 3

MOSES ANNAN

(10845700)

DESIGN AND DEVELOPMENT

OF

DATABASE DRIVEN WEB AND MOBILE APPLICATION

1. **Problem Statement**

Microfinances and savings and loans companies in developing countries like Ghana have **limited data management capacity**.

2. **Software Process**

   ➤ **Software Requirement**

   o **Functional requirement**
   - The system shall allow the administrator to add customers account.
   - The system shall allow the administrator to manage customers account's data. (i.e., The administrator can view and update customers' data).
   - The system shall allow the administrator to post news and also manage the website.
   - The system shall allow customers to perform transactions.
   - The system shall generate transactions data for each customer.
   - The system shall allow customers to withdraw money through ATM.
   - The system shall allow customers to submit grievances.
   - The system shall generate full details of customer's account.
   - The system shall allow customers to view their profile.
   - The system shall provide a search facility.

   o **Non-functional requirement**

     • **Reliability**
   - The system shall be completely operational at all times.

     • Useability
   - Customers should be able to perform transactions without difficulty.
   - Customers should be able to perform unlimited transactions.

     • **Performance**
   - The system should be able to support over 500 customers simultaneously.
   - The mean time to navigate through pages over 56kbps modern connection shall not exceed 0.5 seconds.

     • **Security**
   - The system shall provide password protected access to customers accounts as well as the administrator.
   - The system shall log out customers as well as the administrator after 5 minutes of inactivity.
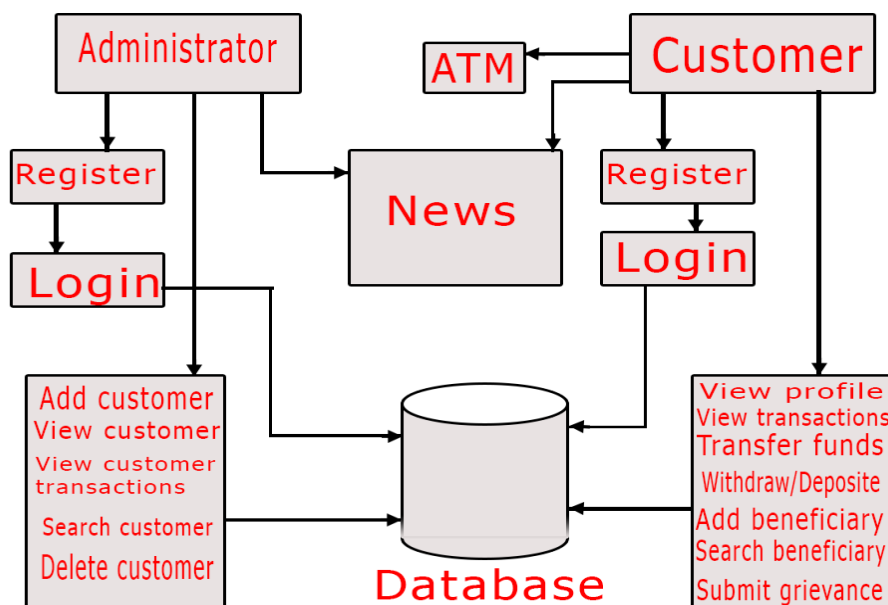
     • **Supportability**
   - The system shall accommodate unlimited customers accounts.

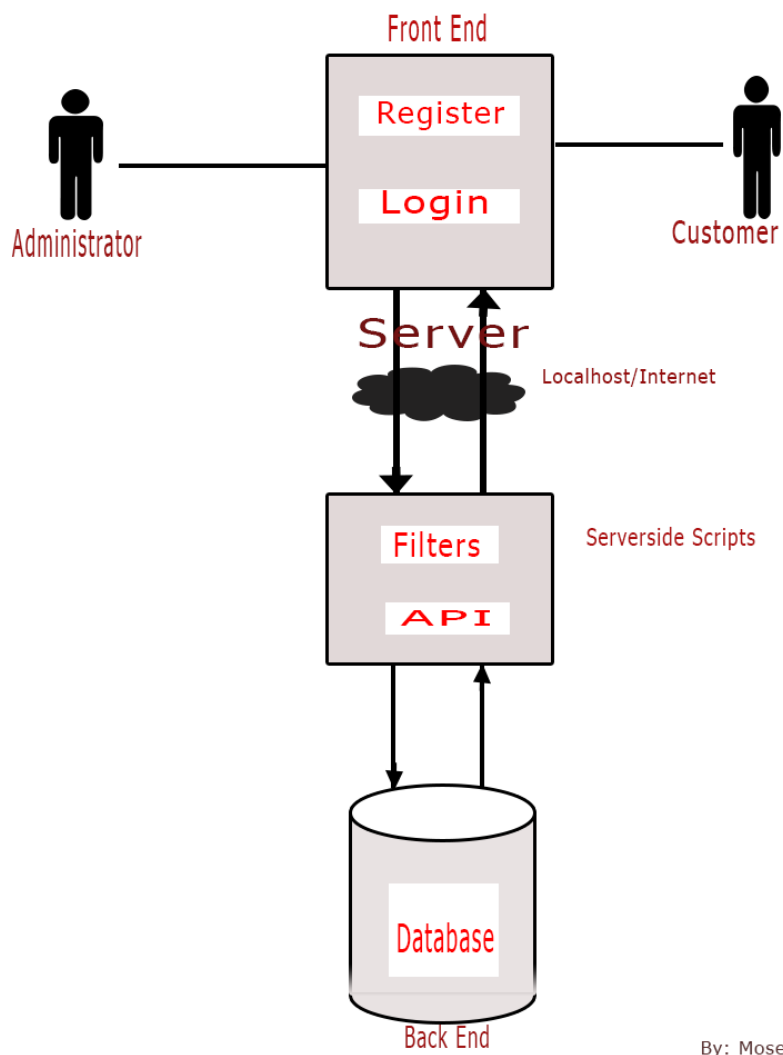- The system internet shall be viewable from any web browser with version 3.0 or later.

3. Design and Implementation

- **Web App**

  i. PHP
  ii. JavaScript
  iii. MYSQL
  iv. XAMPP (Localhost)

- **Android App**

  i. Java
  ii. XML

- **IDE**

  i. Android Studio
     - Mobile App

  ii. Visual Studio Code
     - Web App

4. System Modelling

5. System Architecture

Front End

Register

Login

Administrator

Customer

Server

Localhost/Internet

Filters

API

Serverside Scripts

Database

Back End

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