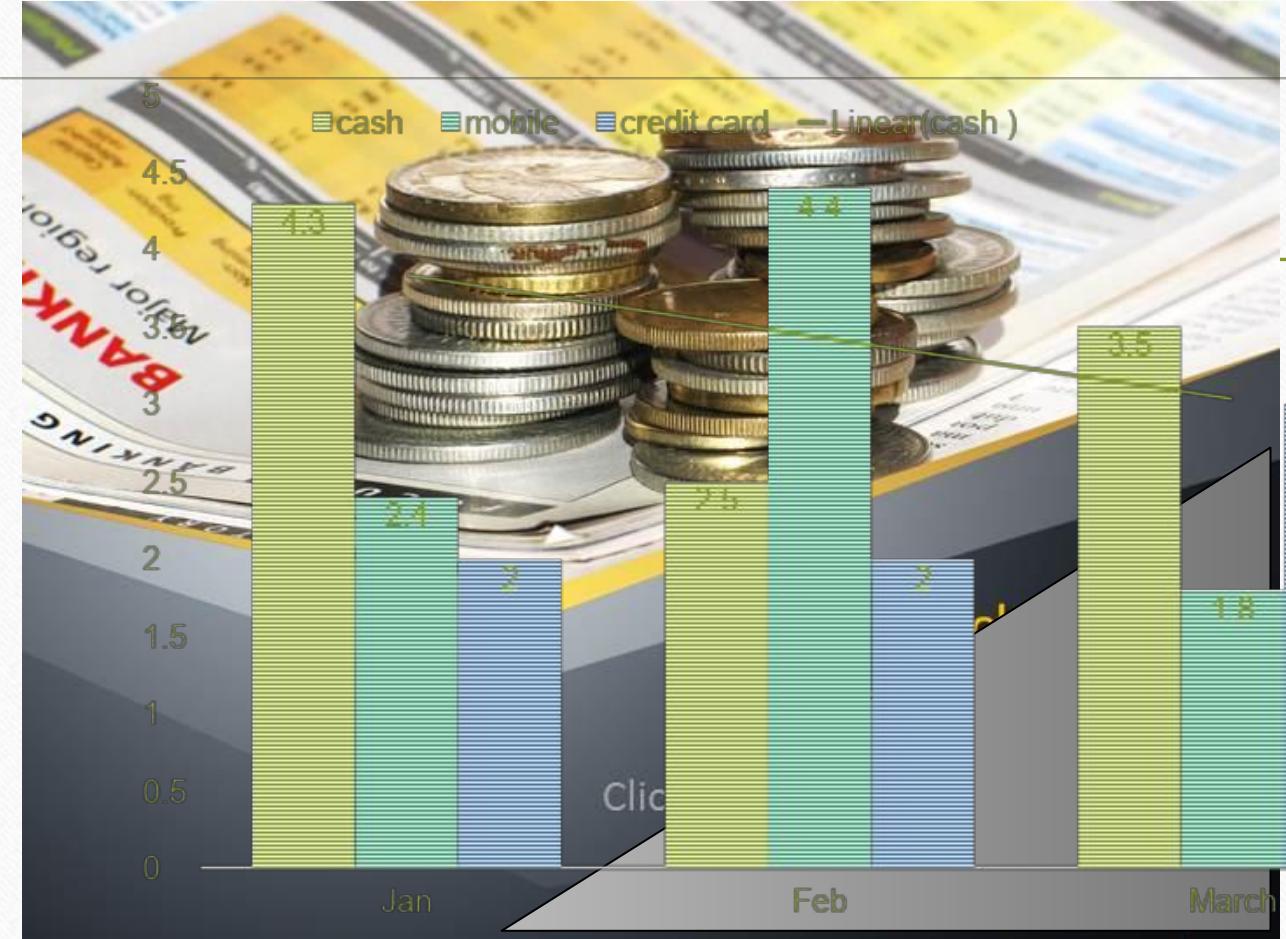




# KUZIMBA SERVICES GROUP

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Presents



# CASH MANAGEMENT SYSTEM (CMS)

Sept 2020

## Back Ground: Cash Management

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- ❖ Cash Management is defined as the collection, handling, control and investment of the organizational cash and cash equivalents to ensure optimum utilization of the firm's/business liquid resources.
- ❖ Money is a lifeline of any business, hence it is essential to maintain a sound cash flow position.
- ❖ The money market has evolved over the time, from physical paper money moving from one hand to another, to online transfers, to trading in other forms of money like Bitcoins, mobile money, airtel money, ATM cards etc.

## Problem Statement

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- The biggest goal of good cash flow management is to reduce or eliminate any surprises when meeting cash requirements. Good cash management influences efficiency of operations and reduces overall cost of doing business.
- In Uganda today, the reception of these different forms of cash management has not been on the digital platform. Daily sales and tracking of money has been more less writing in small exercise books or papers which are eventually disposed off both knowingly and unknowingly by sometimes the business owners or even employees. Uncertainties such as theft, fires and natural disasters also contribute to the loss of financial records.
- That is why the kuzimba services group is coming up with a cash management system targeting the fast growing business community.

# Benefits

Manage Cash Balances

Convenience  
(Phone/Laptop)



Growth

Financial Security

Avoid Bankruptcy

## Benefits in Detail

- The application will help manage the cash balances of an enterprise/business in such a way as to maximize the availability of cash not invested in fixed assets or inventories and to do so in such a way as to avoid the risk of insolvency.
- Manage finances from the convenience of a phone, computer or tab.
- Growth planning: with easy access to the cash flow, one is able to plan for their expansions, restocking and also monitor their stock without physically being at the business premises.
- Financial Security: The financial records of the cash flow shall be securely stored in a password-protected online database to keep the data safe from loss, destruction or unauthorized access.
- Preventing Bankruptcy: With knowledge of the cash flow, you can know when to recapitalize your business and avoid unnecessary expenditures.
- Businesses with good cash flow records easily acquire loans from banks.

## “The Woman Aspect”

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- We cannot completely rule out the role of men in society in providing security and doing the hard task job. However opportunities to include the woman can be availed in various ways by creation of leadership roles, project management roles, cash management roles as per say, women can be the face for any business firm/enterprise.
- Take for example, besides the saloons, boutiques, massage parlours and the like; the latest building/construction material store managers in Uganda are women working amidst a group of male engineers.
- Over 70% of graduates from Makerere University-Uganda doing finance management and business administration are women . #FinTechs make way for women to join the Tech World.

# Level One Principles

<b>Level One Principle we applied</b>	<b>Description</b>
❖ Cash in-Cash out interoperability (mojaloop)	Gives distinctive classification between sales, expenditures, and modes of payment.
❖ (GUI) User friendly design	Its Interactive and one can view information online from multiple devices
❖ Pricing Transparency	Subscription fee made clear per year and per month for two different pricing plans (Full fledged system/Operator Managed)
❖ Progressive Functional Features	From Web Application to Mobile version, eradication of manual data entry, Message alerts
❖ Success Notifications	GUI Notification/PDF Output
❖ Security	Password Protection/password hashing/SSL Certificate
❖ Government Support	Registration of Cash Management System Product Name by URSB.

# Minimum Viable Product

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## **Phase One:**

1. Road Map
2. GUI, Authentication
3. Manual Entry of Transaction Data by System Operator into the System
4. Notifications of System Updates/Graphical Output/PDF Generation

## **Phase Two:**

1. Automatic Entry of Transaction Data by System Operator into the System
2. Cash in/Cash out interoperability (APIs)
3. Hosting/Testing/Product launch

# Cost Analysis

## General Expected Charges

**Account Opening/Registration (this includes custom domain name, database creation, hosting & security, monitoring cash flow and notifications).**

## Estimated Subscription Fee

- **Business store Operator Managed System**      free trial for 7 days      150,000 Ugx/month  
Special Offer: 1.2m Ugx/year
  - **Full fledged cash management system**      free trial for 3 days      300,000 Ugx/month  
Special Offer: 2.4m Ugx/year

## Estimated Expenditure of \$3000 (Three Months)

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● Marketing Product & Branding	<b>\$1000+</b>
● Transportation & Logistics	<b>\$300+</b>
● Innovation Lab Space, Internet Connectivity, Software and Training Material	<b>\$1200+</b>
● Creation of Mobile Version for personal business/Inclusion of other secure system features	<b>\$500+</b>

## Anticipated Risks/Challenges

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- Hacking by external source & False data entry by operator, Possible data loss
- The Account Data Trust Issue
- Theft (if pin is known)
- Poor/No Internet Connectivity

## Proposed Solutions

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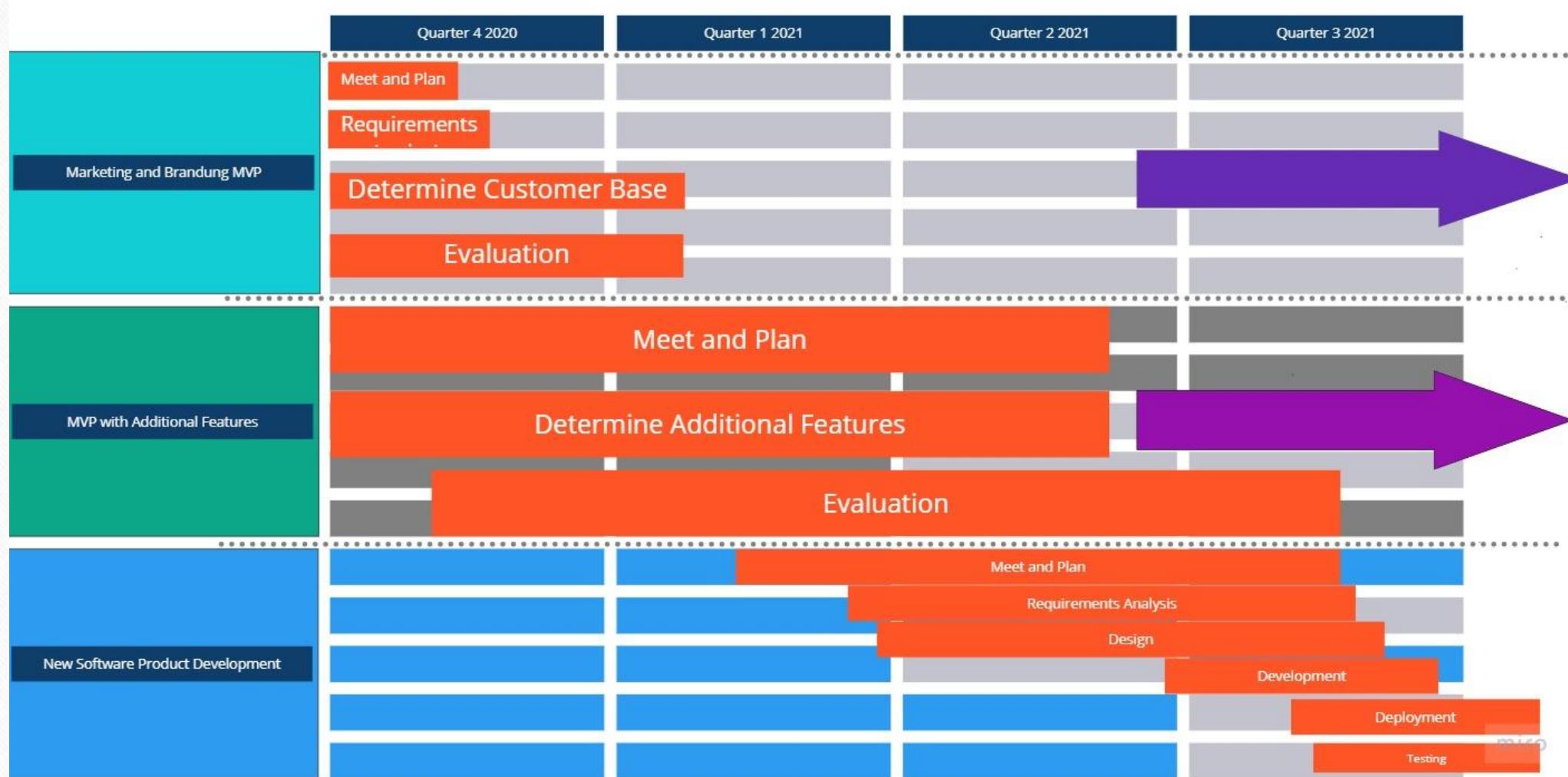
- **Password Protected System/password hashing/SSL and security certificates provided by web host , Duo secure database backup, Penetration (How strong is the firewall) & stress tests (money).**
- **System Updates done by operator**
- **Dual System Control for extra accountability and system monitoring**
- **Automatic Data Entry by the System. Excel Sheets Support. USSD Support**

# Executive Summary

<b>Problem Statement</b>	Monitoring Cash Records in Books/Paperwork is totally Unreliable
<b>Business Case</b>	Cash Management System(CMS) -Web Application
<b>Target Market</b>	Fast Growing /Medium Earning Businesses
<b>Minimum Viable Product/Level One Principles</b>	
❖ Cash in-Cash out interoperability	Gives distinctive classification between sales, expenditures, and cash balances.
❖ GUI-User friendly design	Its Interactive and operator can view cash flow information online
❖ Pricing Transparency	Subscription fee for two different pricing plans (Operator/Owner managed(150k/mth)/Full fledged CMS(300k/mth))
❖ Progressive Functional Features	Notifications, Mobile Version, Security/Authenticity, Gov't Support -Registration URSB, Automatic Data Updates
<b>Benefits</b>	Manage Cash Balances, Convenience, Growth and Development, Security, No Bankruptcy, Easy loan
<b>Tools</b>	Java jsp, MySql Database, Mojaloop, mobile money API's, html, w3css, javascript
<b>Risks/Solutions</b>	Hacking (Password), Trust Issue/False Data Entry (Data to Be reviewed by both actors, ), No Internet (Offline version, ms excel )



# Product Road Map

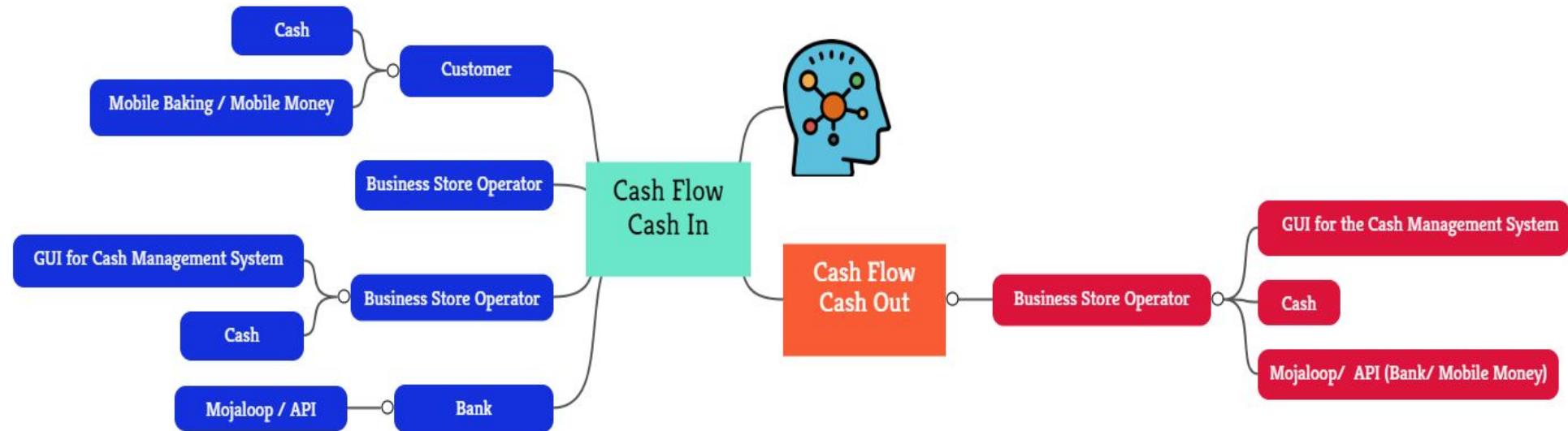


Kuzimba \$

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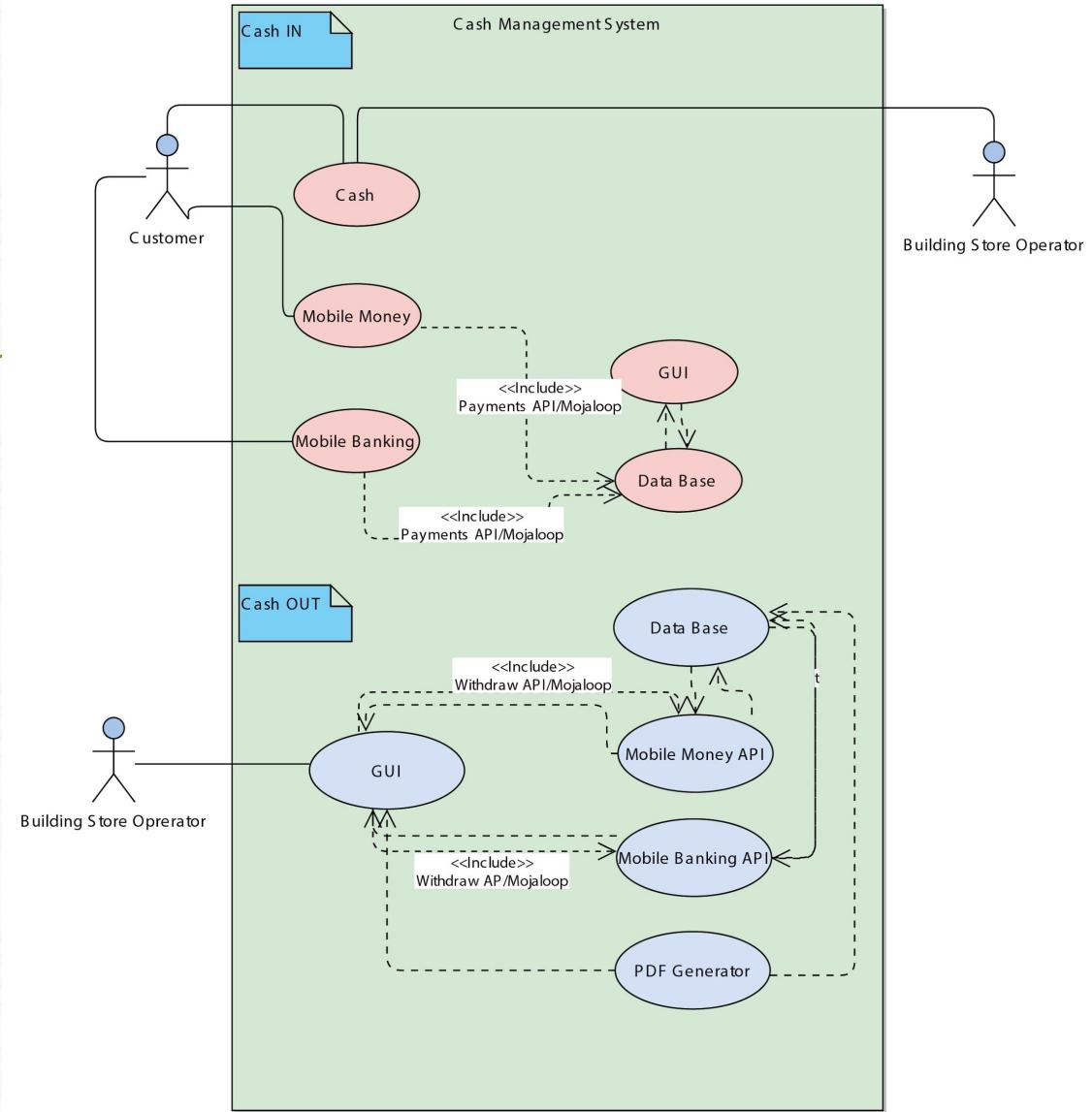
# CMS Flow Diagrams

# MIND MAP

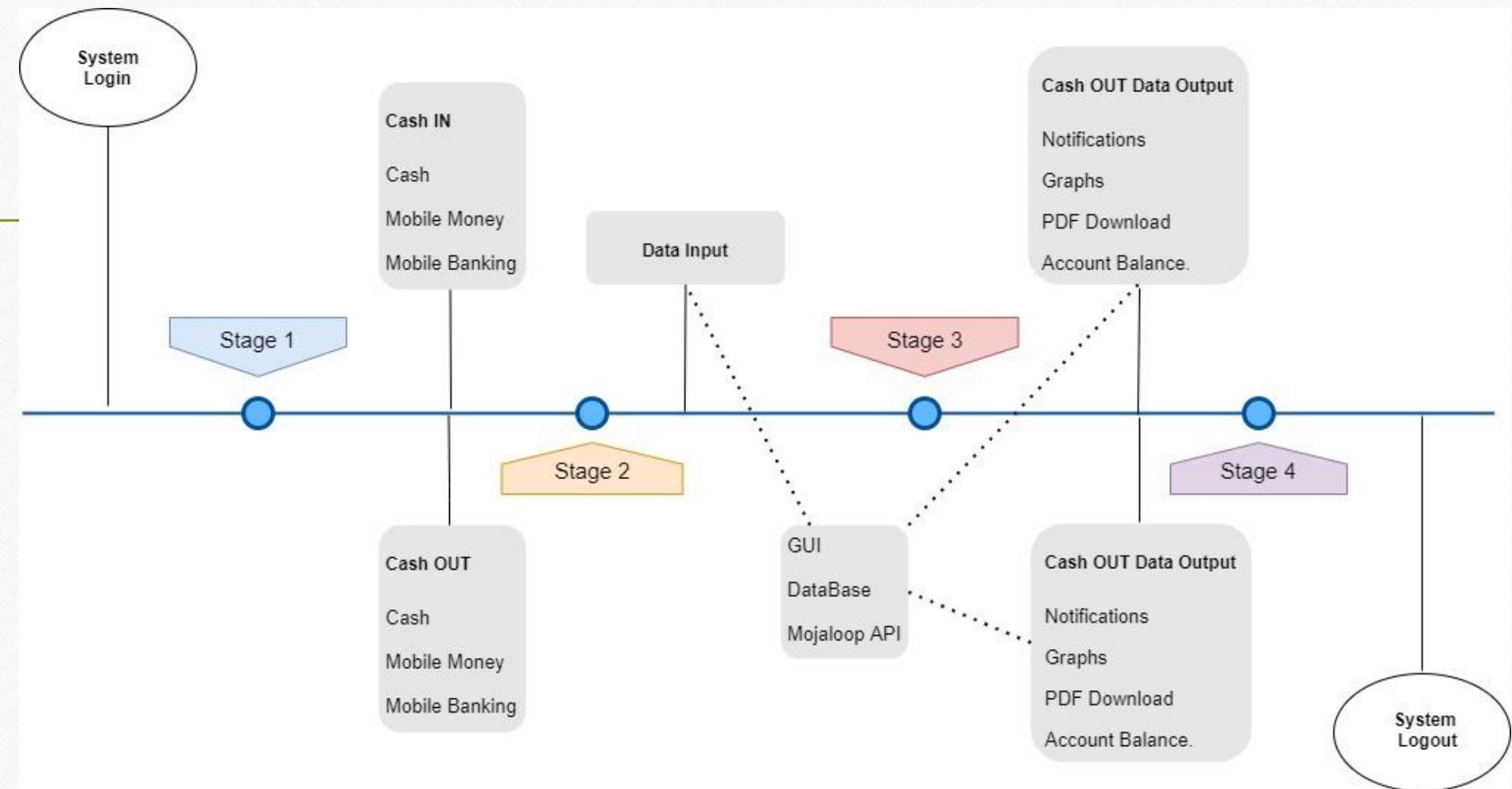




# USE CASE DIAGRAM

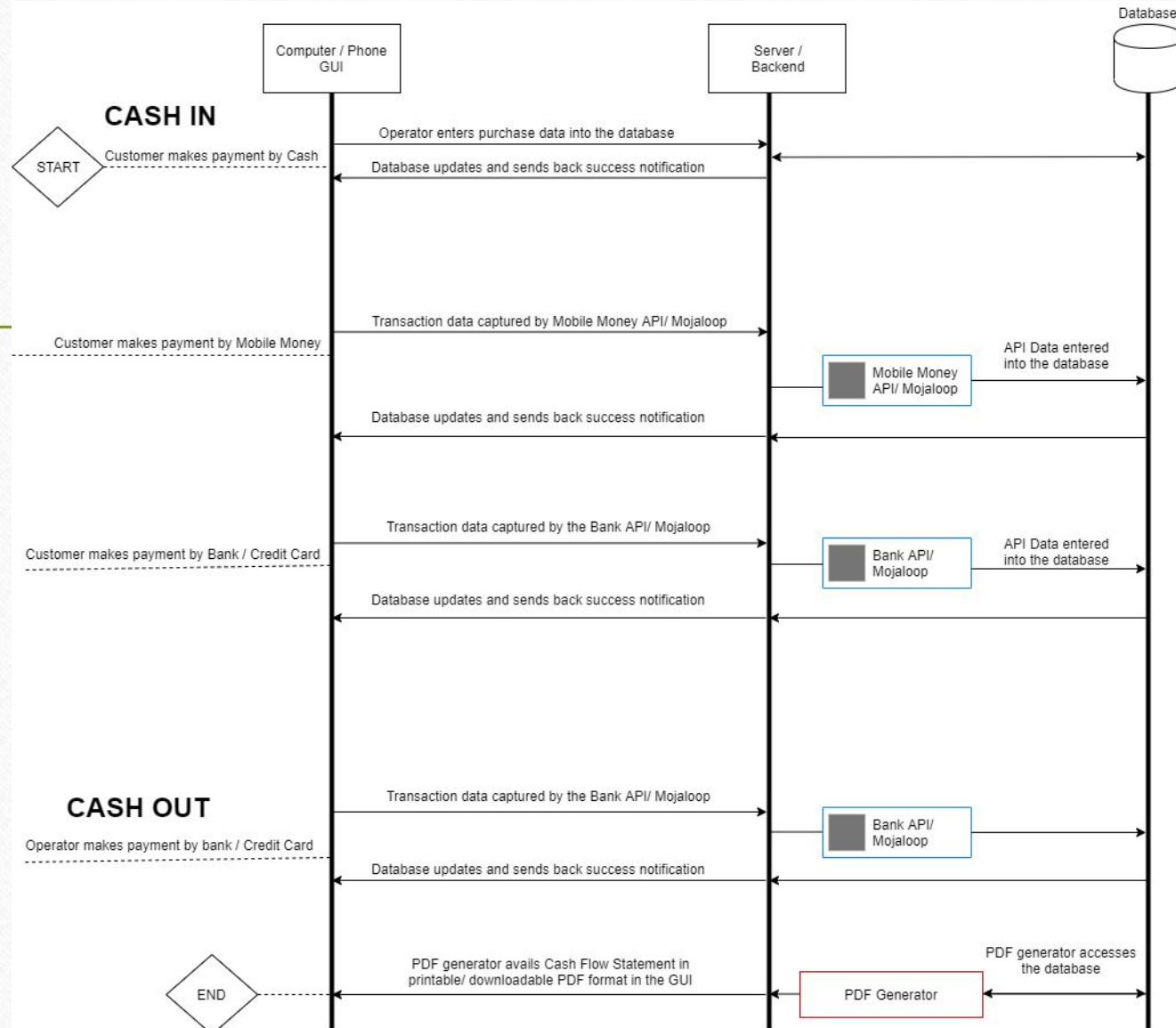


## SYSTEM FLOW





# SEQUENCE DIAGRAM



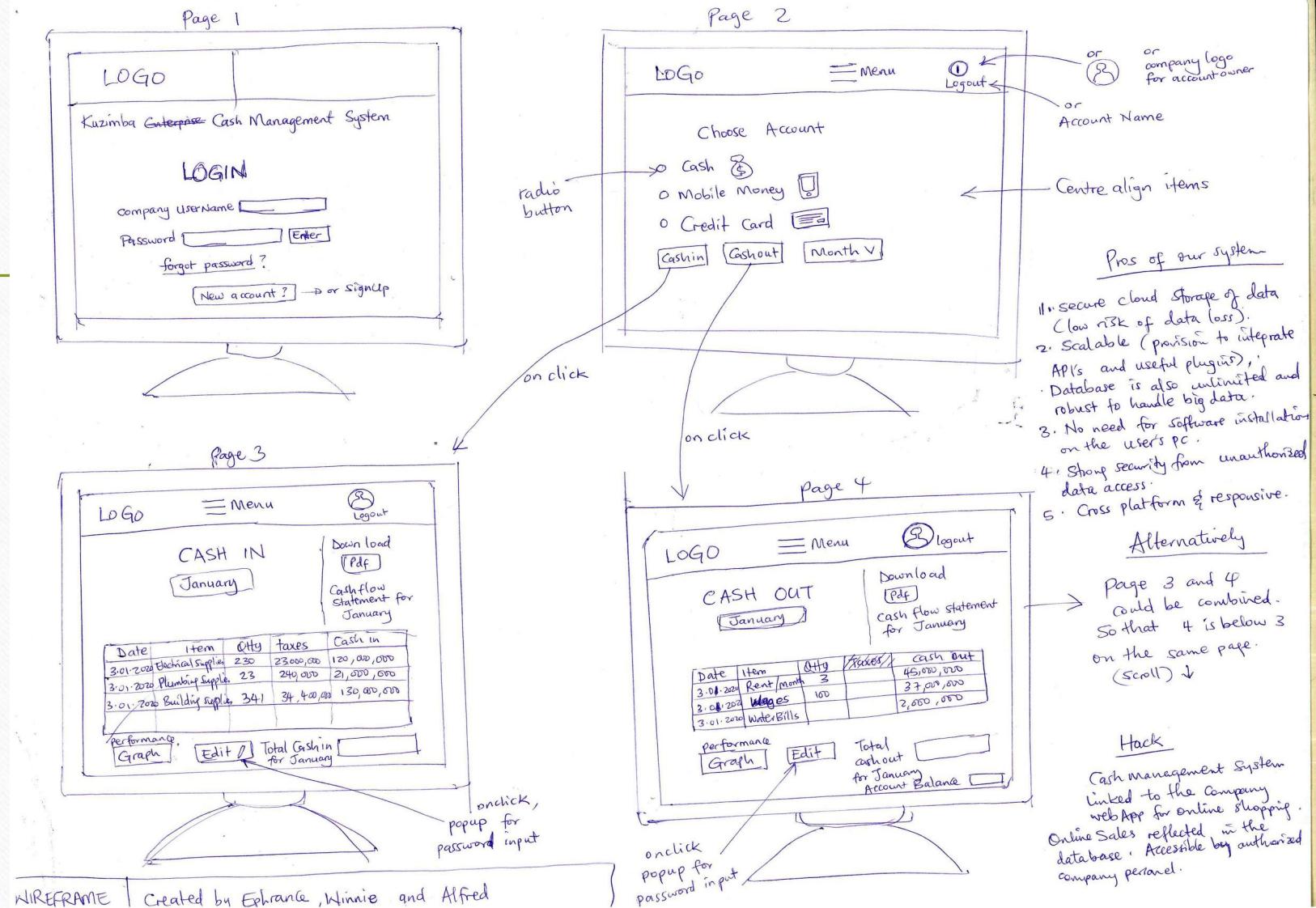
Kuzimba \$

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# CMS Prototype



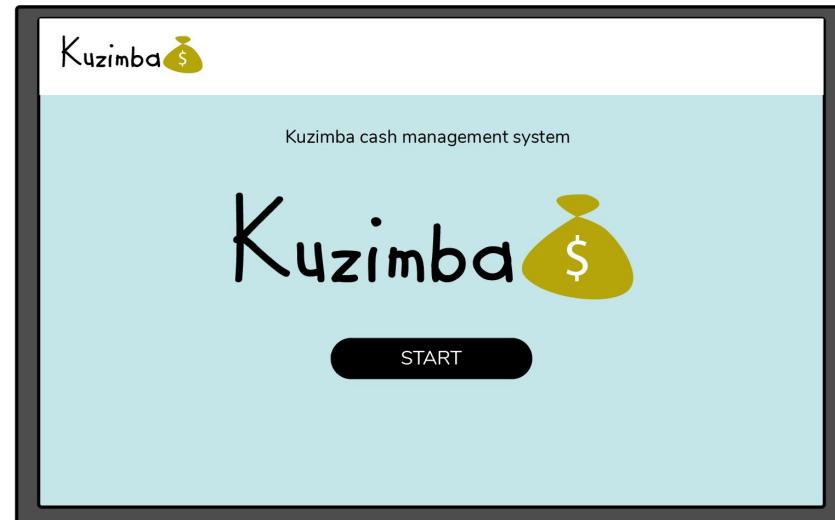
# Wire Frame





MOCKUP

PAGE 1

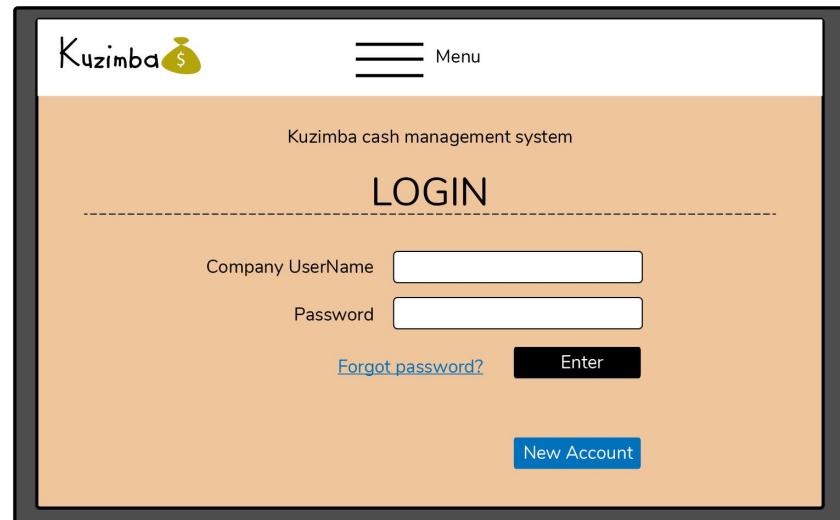


Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred

MOCKUP

PAGE 2



Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred



MOCKUP

PAGE 3

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Menu Logout

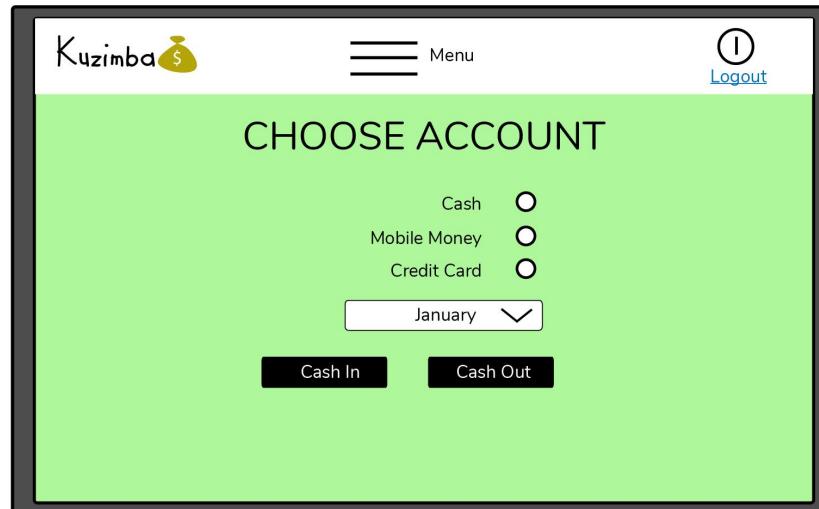
### CHOOSE ACCOUNT

Cash

Mobile Money

Credit Card

January



Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred

MOCKUP

PAGE 4

Kuzimba

Menu Logout

### CASH IN

January

Chosen Account: CASH

Download Pdf  
CashFlow Statement for January

#### NEW PURCHASE

Date	Item	Taxes	Cash In
3.09.2020	Electrical supplies	300,000	2,000,000
3.09.2020	Plumbing supplies	240,000	500,000

Enter

GRAPH FOR CASH IN



1B  
250M  
48M

Edit

Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred



Created by Ephrance, Winnie and Alfred

## MOCKUP

## PAGE 5

The screenshot shows the 'CASH IN' section for the month of January. The 'Chosen Account' is set to 'CASH'. A table titled 'STATEMENT' displays purchases from four dates in 2020:

Date	Description	Quantity	Unit Price	Total Value
3.09.2020	Electrical supplies	230	23,000,000	120,000,000
3.09.2020	Plumbing supplies	23	240,000	21,000,000
3.09.2020	Building supplies	341	34,400,000	130,000,000
3.09.2020	Transportation supplies	22	22	16,000,000

A bar chart titled 'GRAPH FOR CASH IN' shows the total cash in for January, reaching 250M. Below the chart are 'Edit' and 'Cash Out' buttons.

Logout

Download Pdf

CashFlow Statement for January

January

New Purchase

Statement

Chosen Account: CASH

STATEMENT

3.09.2020 Electrical supplies 230 23,000,000 120,000,000  
3.09.2020 Plumbing supplies 23 240,000 21,000,000  
3.09.2020 Building supplies 341 34,400,000 130,000,000  
3.09.2020 Transportation supplies 22 22 16,000,000

GRAPH FOR CASH IN

1B  
250M  
48M

Total cash in for January  
UGX 287,000,000

Edit Cash Out

Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred

## MOCKUP

## PAGE 6

The screenshot shows a success message after a deposit. The 'Chosen Account' is still 'CASH'. The message reads:

Operation Successful!

You have deposited UgX 2,500,000 into your cash account.  
Your total account balance is now UgX 289,500,000

New Purchase Statement

Logout

January

Chosen Account: CASH

Operation Successful!

You have deposited UgX 2,500,000 into your cash account.  
Your total account balance is now UgX 289,500,000

New Purchase Statement

Edit Cash Out

Kuzimba Cash Management System



Created by Ephrance, Winnie and Alfred

## MOCKUP

## PAGE 7

The screen shows the 'CASH OUT' section for the month of January. A dropdown menu shows 'January'. Below it, a table lists withdrawals:

Date	Item	Taxes	Cash In
3.09.2020	Electrical supplies	300,000	2,000,000
3.09.2020	Plumbing supplies	240,000	500,000

Buttons for 'Withdraw' and 'Statement' are present. At the bottom, a cash balance is shown as 'UGX 200,000,000' with 'Edit' and 'Cash In' buttons.

Kuzimba Cash Management System

## MOCKUP

## PAGE 8

The screen shows the 'CASH OUT' section for the month of January. A dropdown menu shows 'January'. Below it, a table lists withdrawals:

Date	Item	Qty	Cash Out
3.09.2020	Rent	3	45,000,000
3.09.2020	Electricity bills		3,000,000
3.09.2020	Water bills		2,000,000
3.09.2020	Salary / Wages	100	37,000,000

A 'STATEMENT' button is visible above the table. A bar chart titled 'GRAPH FOR CASH OUT' shows values for 1B, 250M, and 48M. A message box at the bottom right states: 'You have withdrawn 270,000 UGX from your Cash Account. Your Cash account balance is 28,000,000 UGX'. Buttons for 'Edit' and 'Cash In' are at the bottom.

Kuzimba Cash Management System

Created by Ephrance, Winnie and Alfred



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# Minimum Viable Product

Front End



Kuzimba

## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow

The chart displays the following data:

Category	Jan	Feb	Mar
cash	4.3	2.5	3.5
mobile	2.4	4.4	1.8
credit card	2	2	3

### LOGIN

Company UserName

Password

[forgot password?](#)

**ENTER**

[New Account?](#)

[Payment API](#)

Created by Ephrance, Winnie & Alfred



## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow

Month	Cash	mobile	credit card
Jan	4.3	2.4	2
Feb	2.5	4.4	2
Mar	3.5	1.8	3

### CHOOSE ACCOUNT

Cash

Mobile Money

Credit Card

Choose Month

Cash In  Cash Out

Created by Ephrance, Winnie & Alfred



Kuzimba \$

Cash Out Log Out

## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow

## CASH IN

For the month of January

January

Choose

Cash Flow Statement for January

Download Pdf

## DATA ENTRY FOR NEW PURCHASE

Id	Date	Item	Quantity	Tax	Cash In
	2020-Sept-22			18	



Kuzimba

Cash Out Log Out

## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow

### CASH IN

For the month of January

Another Month

Choose

### STATEMENT

New Purchase

Cashed Account: Cash

Date	Item	Quantity	Tax	Cash In
	2020-Sept-22	1200		234000000
2	2020-Sept-22	3		21000000

Cash Flow Statement for January

Download Pdf

Total Cash In :25490000

Edit  Cash Out

## Cash-In Performance Graph

For the month of January

Load Graph



Created by Ephrance, Winnie & Alfred



Save As

« KUZIMBA WEB APP > WEB APP > docs

Organize New folder

Name Date modified Type Size

Kuzimba Services Cash Management Sys... 9/17/2020 9:13 AM Chrome HTML Do... 3,878 KB

KEEM

Cash Out Log Out

Cash Flow Statement for January

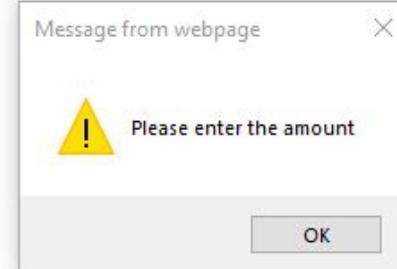
Download Pdf

Date Item Quantity Tax Cash In

Date	Item	Quantity	Tax	Cash In
2020-Sept-22	Sand	10		1200000

## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow



## PAY FOR PRODUCTS

Amount

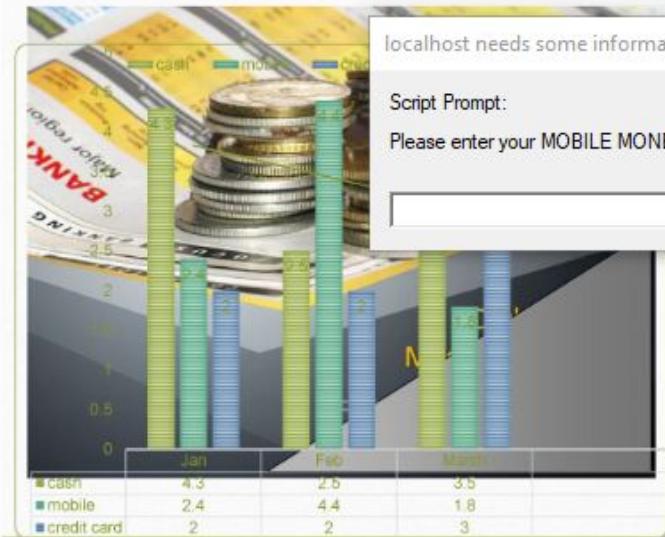
What product are you buying?

UGX

ENTER

## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow



localhost needs some information

Script Prompt:

Please enter your MOBILE MONEY PIN

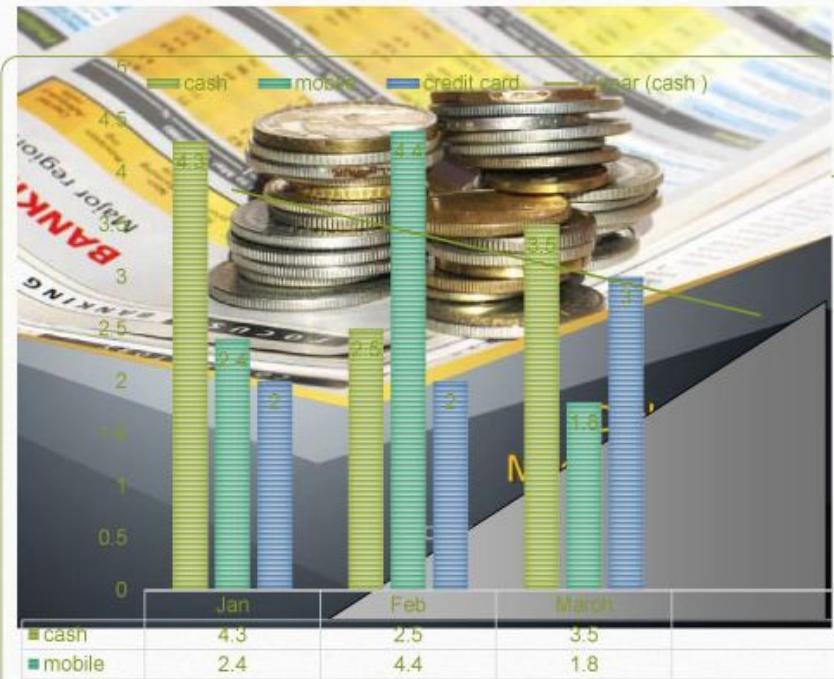
## PAY FOR PRODUCTS

Amount  
What product are you buying?  
UGX



## KUZIMBA CASH MANAGEMENT SYSTEM

A better way to manage your business cash flow



## PAY FOR PRODUCTS

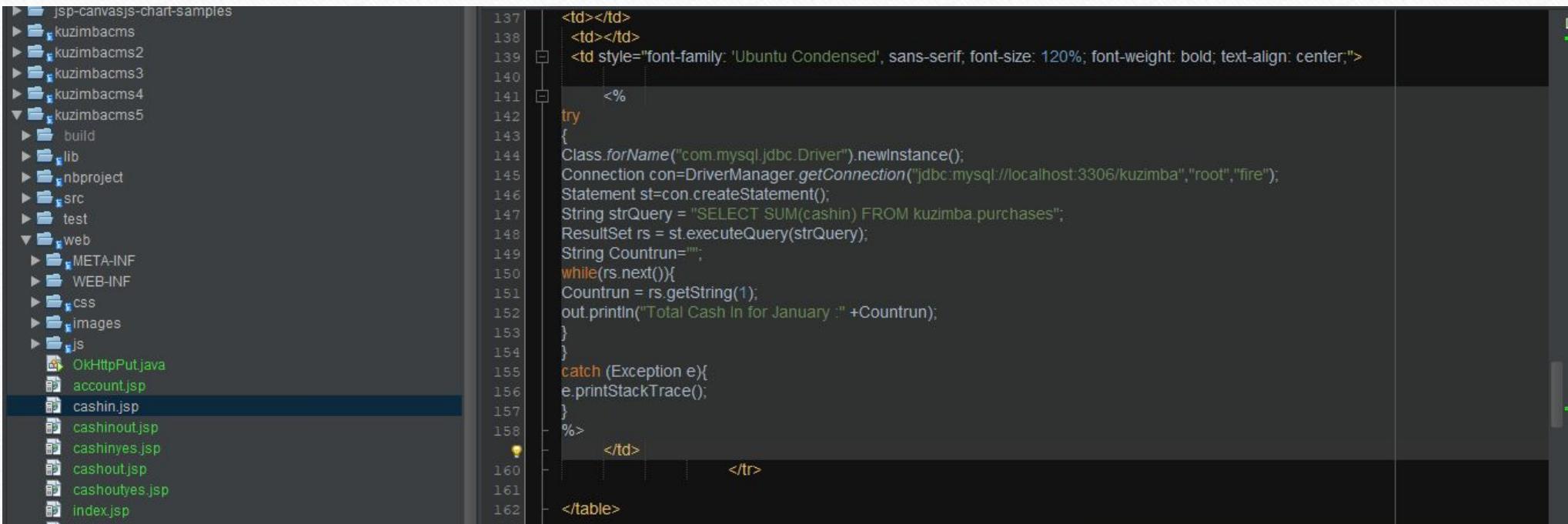
SUCCESS !

You have sent 45000 EURO to 0773913902

New Payment

# Minimum Viable Product

## Back End



The screenshot shows a code editor with a dark theme. On the left is a file tree for a Java web project:

- jsp-canvasjs-chart-samples
- kuzimbacms
- kuzimbacms2
- kuzimbacms3
- kuzimbacms4
- kuzimbacms5** (selected)
- build
- lib
- nbproject
- src
- test
- web
  - META-INF
  - WEB-INF
  - css
  - images
  - js
    - OkHttpPut.java
    - account.jsp
    - cashin.jsp** (selected)
    - cashinout.jsp
    - cashinyes.jsp
    - cashout.jsp
    - cashoutyes.jsp
    - index.jsp

The selected file, cashin.jsp, contains the following Java code:

```
137 <td></td>
138 <td></td>
139 <td style="font-family: 'Ubuntu Condensed', sans-serif; font-size: 120%; font-weight: bold; text-align: center;">
140 <%
141 try {
142 Class.forName("com.mysql.jdbc.Driver").newInstance();
143 Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/kuzimba","root","fire");
144 Statement st=con.createStatement();
145 String strQuery = "SELECT SUM(cashin) FROM kuzimba.purchases";
146 ResultSet rs = st.executeQuery(strQuery);
147 String Counrun="";
148 while(rs.next()){
149 Counrun = rs.getString(1);
150 out.println("Total Cash In for January :: "+Counrun);
151 }
152 }
153 catch (Exception e){
154 e.printStackTrace();
155 }
156 %>
157 </td>
158 </tr>
159
160 </table>
```



# Minimum Viable Product

Github Repository

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<https://github.com/Ephrance/Kuzimba-services>

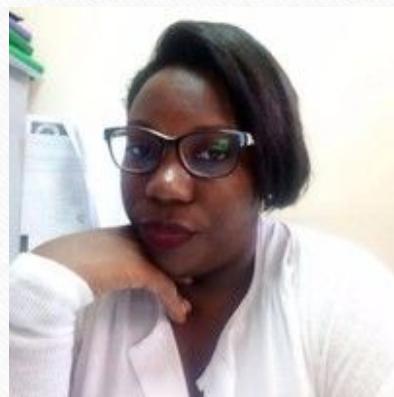
Kuzimba \$

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# System Work Plan

<b>Goal 1: Data collection and planning</b>					
<b>Key Action Steps</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Tools</b>	<b>Person Responsible</b>	<b>Comments</b>
1. Business case Development 2. Problem statement 3. Work plan	Day One	Business case, Problem Statement	Internet, Bankers, Adobe illustrator, MS PowerPoint, MS word	All Project Members	Done
<b>Goal 2: Design and Development of the Graphical User Interface and Flow Diagrams</b>					
<b>Key Action Steps</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Tools</b>	<b>Person/Area Responsible</b>	<b>Comments</b>
1. Mind Map 2. Use case Diagram 3. Flow Diagram 4. Sequence Diagram 5. Wireframe/Graphical User Interface (GUI)	Day One Day Two	GUI & Prototype	Adobe Photoshop, Adobe Illustrator, Mind tool, Diagram Editor, Justinmind tool, MS Powerpoint/PDF	All Project Members	Done
<b>Goal 3: Database Development and Backend Programming of the system</b>					
<b>Key Action Steps</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Tools</b>	<b>Person/Area Responsible</b>	<b>Comments</b>
1. Minimum Viable Product Development 2. Database Development 3. Graphical Output Integration 4. Extra Functionality Integration (Success Notification, Cash Flow Statement in PDF etc.)	Day Three Day Four	Minimum Viable Product	IDE: Netbeans, Heidi SQL, MySQL Database, Java (JSP), Javascript, HTML, W3 CSS/CSS, Canvasjs, Mojaloop	All Project Members	70 Percent Done
<b>Goal 4: Testing, Troubleshooting and Presentation of the System</b>					
<b>Key Action Steps</b>	<b>Timeline</b>	<b>Expected Outcome</b>	<b>Tools</b>	<b>Person/Area Responsible</b>	<b>Comments</b>
1. Testing 2. Troubleshooting 3. Presentation	Day Five	Error Free Prototype	Diverse Digital Platforms Microsoft Powerpoint	All Project Members	Progressive

# Meet the Team



<b>NAME</b>	<b>Ephrance Eunice Namugenyi</b>	<b>Winnie Shama Nalusiba</b>	<b>Alfred Ochola</b>
<b>EMAIL</b>	<b>ephrancenamugenyi@gmail.com</b>	<b>winyshama@gmail.com</b>	<b>ochalfie@gmail.com</b>
<b>PHONE NUMBER</b>	<b>+256 777084882</b>	<b>+256 776777202</b>	<b>+256 773913902</b>
<b>ROLE</b>	<b>Team Leader</b>	<b>Team Member</b>	<b>Team Member</b>

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THANK YOU  
&  
God Bless



MODUSBOX

CROSSLAKE



INCLUDE  
EVERYONE