

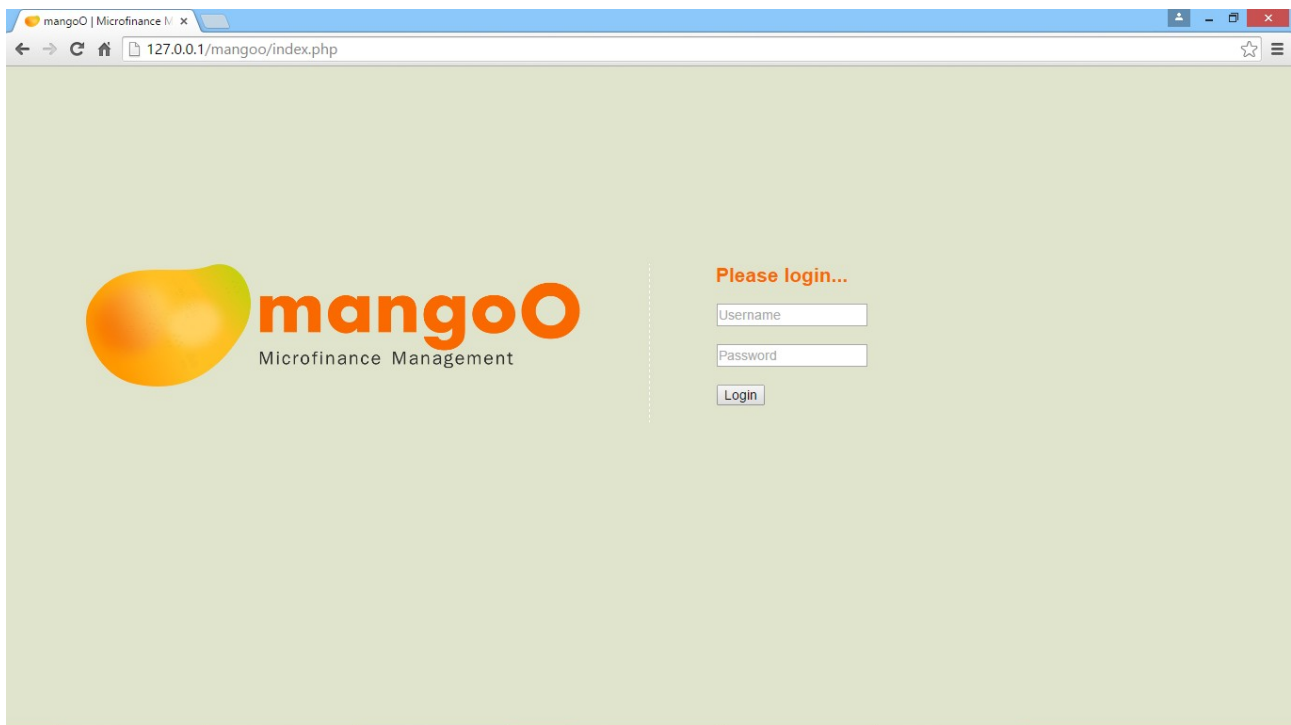
# mangoO Microfinance Management v2.2.0

## - User Manual -

mangoO Microfinance Management is a software solution for small scale (usually single-branch) micro-finance institutions. It was first developed for Luweero Diocese SACCO (Savings and Credit Cooperative) in Luweero, Uganda.

### 1 Getting Started

As mangoO is based on web technology, you will need a web browser to use the program. It is recommended to use Mozilla Firefox, Chrome, or Chromium. Your administrator should have provided you with an address or link to gain access to mangoO.



On the start page of mangoO, please provide a valid **user name** and **password**. In case you do not possess such login information, please contact your system administrator.

Overdue Subscription Fees		
Cust. No.	Customer Name	Last Paid
22/2006	Arnetta Lobato	25.09.2013
11/2006	Nydia Melvin	18.01.2014
13/2006	Melania Mitchem	14.05.2014

Defaulted Loan Instalments			
Loan No.	Customer Name	Due Date	Amount Due
L 105-1	Latoya Ensley	30.11.2012	525,000 UGX
L 89-1	Susie Cratty	11.04.2015	143,333 UGX
L 161-1	Gwendolyn Kimbro	23.04.2015	2,860,000 UGX
L 125-1	Terrie Fasset	02.05.2015	165,000 UGX
L 182-1	Sharell McCormick	12.05.2015	108,333 UGX
L 20-1	Berry Steve	12.05.2015	143,333 UGX
L 89-1	Susie Cratty	12.05.2015	143,333 UGX
L 125-1	Terrie Fasset	02.06.2015	165,000 UGX
L 182-1	Sharell McCormick	12.06.2015	108,333 UGX
L 152-1	Melina Zak	30.06.2015	298,500 UGX
L 156-1	Shawnta Deltoro	30.06.2015	460,000 UGX
L 151-1	Glynda Delcambre	30.06.2015	450,000 UGX
L 146-1	Kai Ridlon	30.06.2015	154,000 UGX
L 173-1	Zetta Zambrano	30.06.2015	478,000 UGX
L 178-1	Adah Brumbaugh	30.06.2015	155,000 UGX
L 186-1	Lorina Olden	30.06.2015	135,750 UGX
L 187-1	Ty Stgelais	30.06.2015	528,000 UGX
L 189-1	Vanita Eaves	30.06.2015	10,000 UGX
L 193-1	Jayson Reader	30.06.2015	100,000 UGX
L 196-1	Nan Amarante	30.06.2015	355,000 UGX

## 1.1 The User Dashboard

After logging in, the system will take you to the **user dashboard**. Depending on the system's basic settings, you will find different types of information (see 7.1).

The *Overdue Subscription Fees* list will display all customers whose **annual subscription** has expired. In order to access a customer's record, click the respective customer number. Depending on the respective setting (see 7.1), customers might automatically be set to inactive, if their subscription has expired for more than 18 months.

The *Defaulted Loan Instalments* table shows all currently **defaulted loan installments**. In order to access the loan's record, click the respective loan number. Depending on the respective setting (see 7.2), defaulters might automatically be charged a predefined default fine which will be deducted from their savings accounts after a delay in payment of more than 30 days.

The options in the upper menu bar give you quick access to the most frequently used functions. **Search Customers** accesses the customer search form (see 2.1), **Search Loan** the loan search form (see 4.1), and **New Customer** allows you to create a new customer record (see 2.2).

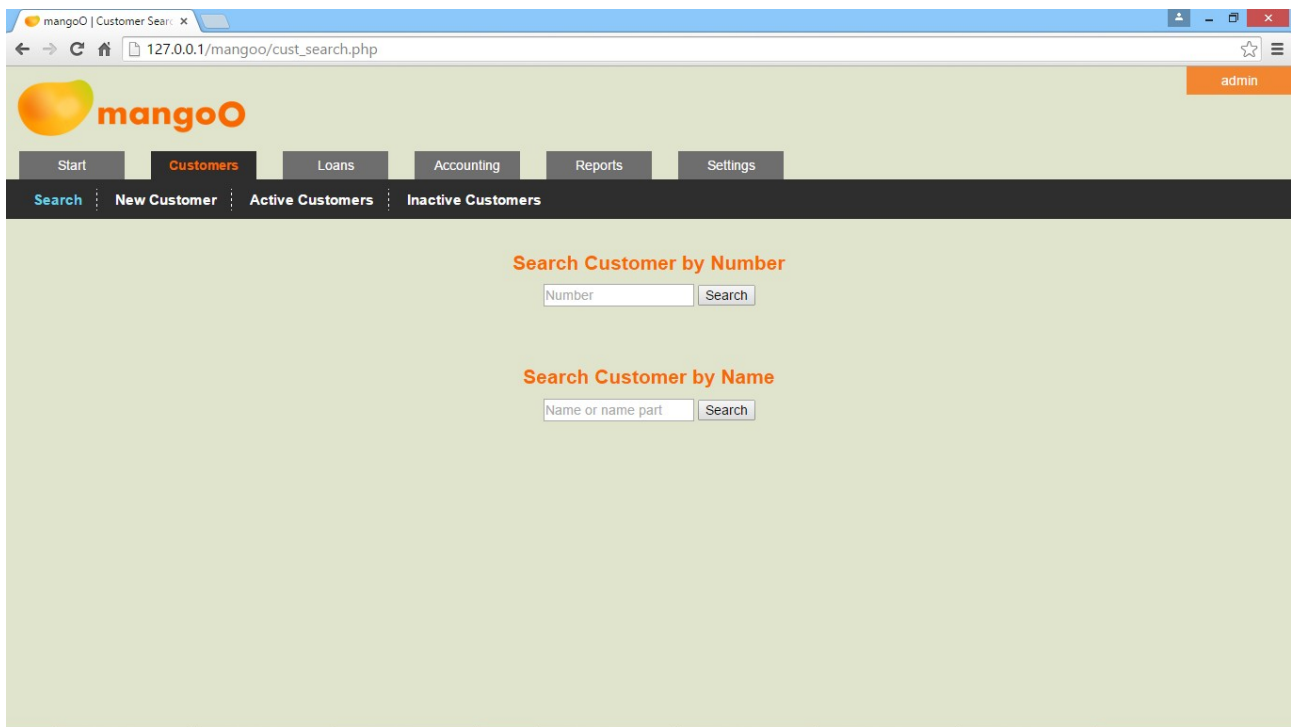
## 2 Customers

Under the tab **Customers** you will find all tools for managing customer records.

### 2.1 Customer Search

The customer search form allows you to search the database for customers. The upper input field is

used to search for a customer **by number**. Since customer numbers are unique identifiers, as long as the customer number exists, you will be taken directly to the respective record. If a given number does not exist in the database, an error message will appear.



The screenshot shows a web browser window with the URL `127.0.0.1/mangoo/cust_search.php`. The page features the mangoO logo and a navigation bar with tabs for Start, Customers (selected), Loans, Accounting, Reports, and Settings. Below the navigation bar, there are links for Search, New Customer, Active Customers, and Inactive Customers. The main content area contains two search sections: "Search Customer by Number" with a text input labeled "Number" and a "Search" button, and "Search Customer by Name" with a text input labeled "Name or name part" and a "Search" button.

The lower input field allows for **searches by name** or name parts. As names are, by nature, ambiguous, this search will take you to a result page. mangoO will search for any customer on the database whose name contains the given search criteria, regardless of its position within the name. For example, a search for the string *shu* will yield *Shumate* as well as *Joshua*. If a given search criteria does not match with any name in the database, the search result list will remain empty.

Cust. No.	Name	DoB	Gender	Place of Residence
12/2006	Joshua Vandenburg	29.06.1952	Male	Kiziba Kikyusa Arch
54/2006	Augustina Shuman	01.04.1962	Female	Kaswa- Busula
83/2007	Joshua Meiser	23.02.1937	Female	Kikasa Wobulenzi Cetral
131/1970	Philomena Shumate	29.12.1960	Female	Kizito Lc1

In order to access a customer's record from the search result page, click the respective customer number.

## 2.2 New Customer Record

This page allows you to enter a new customer record into the database.

**New Customer (201/2015)**

Name:  Residence:  Sickness:

Gender: ☒ Male ☐ Female ☐ Instit. Phone No:  Member since:

DoB:  E-Mail:

Marital Status:  Representative:

Occupation:  Relation:  Active: ☒

Receipt No:

Customer numbers are automatically generated and assigned by the system and cannot be altered by

the user.

The fields for name, date of birth, place of residence, and phone number are compulsory to fill. In addition, mangoO will perform consistency checks on entered phone numbers and email addresses.

The system will automatically assume the current date to be the date when the new customer registered with the institution. In case the customer joined at an earlier date, you may adjust the value of **Member since** accordingly. Please note that throughout mangoO, all dates must be given in the format DD.MM.YYYY (for example 03.01.2016).

New customers are by definition considered to be active. Thus, the activity status cannot be changed on registration. Finally, a receipt number for the entrance fee must be specified.

On clicking **Continue**, the new record will be written to the database. In a next step, mangoO will allow you to upload a digital picture of the respective customer. Permissive file formats are JPG, JPEG, PNG, TIF, and TIFF. In case you do not wish to upload a picture, choose **Skip**.

## 2.3 Predefined Lists for Customers

In addition to the search function, mangoO offers two predefined lists of customers by status.

### 2.3.1 List of Active Customers

The short link **Active Customers** will show a list of all customers whose status is currently set to **Active**. You may access a particular record by clicking the respective customer number.

Clicking **Export Active Customers** above the list will generate an XLS file which can then be altered, printed, sent, or otherwise used outside mangoO.

### 2.3.2 List of Inactive Customers

The short link **Inactive Customers** will show a list of all customers whose status is currently inactive. You may access a particular record by clicking the respective customer number.

Clicking **Export Inactive Customers** above the list will generate an XLS file which can then be altered, printed, sent, or otherwise used outside mangoO.

## 2.4 Customer Details Page

When retrieving a customer's record, either through searching or through selection from one of the lists, mangoO displays all information on the respective customer on a comprehensive details page.

### 2.4.1 Basic Customer Data

The data fields on the left-hand side show the customer's basic data. They can be changed any time by overwriting the respective field and clicking **Save Changes**.

Every data update will be logged by the system and displayed in **Updated on / by**. Due to the nature of the information, the data in **Member since**, **Subscription paid until**, and **Updated on / by** cannot be changed manually.

#### 2.4.1.1 Customer's Photo

The small picture icon next to the customer's name indicates whether or not a photo has been uploaded for the respective customer (see 2.2). A coloured icon represents an existing picture. Click the icon to view the customer's photograph. A grey-scale icon indicates a missing picture. Click the icon to upload a new photograph for the respective user.

The screenshot shows the mangoO Customer profile page for Jean Calvin (3/2006). The page is divided into several sections:

- Header:** mangoO logo and navigation tabs: Start, Customers (selected), Loans, Accounting, Reports, Settings.
- Sub-navigation:** Search, Deposit, Withdrawal, Add Shares, New Loan, New Customer, Active Cust. (selected), Inactive Cust.
- Customer Details:**
  - Name: Jean Calvin, Residence: Geneva, Sickness: None
  - Gender: Male (selected), Fem., Inst., Phone No: 0760-548193, Member since: 07.09.2006
  - DoB: 21.11.1961, E-Mail: j.calvin@reformed.org, Subscription paid until: 01.01.2016
  - Marital Status: Married, Representative: Marie Calvin, Updated on / by: 31.07.2015 / admin
  - Occupation: Reformer, Relation: Wife, Active: ☒
- Buttons:** Update Data, Membership
- Savings Account (Recent Transactions):**

Date	Transaction Type	Amount	Receipt/Slip
03.05.2015	Deposit	15,000 UGX	R 123
22.06.2015	Deposit	80,000 UGX	R 456
09.07.2015	Withdrawal	-40,000 UGX	S 100
09.07.2015	W/drawal Fee	-1,000 UGX	R 789
02.10.2015	Deposit	64,000 UGX	R 1011
<b>Balance: 122,000 UGX</b>			
- Loans Account:**

No.	Status	Total Repay	Remaining	Rate Due
-----	--------	-------------	-----------	----------
- Share Account:**

Number of Shares	Value of Shares
6	120,000 UGX

#### 2.4.2 Membership Renewal

In case the **annual subscription** check has been enabled (see 7.1) and the customer's subscription has expired, a warning message will appear and mangoO will automatically show a renewal form below the customer's basic data.

By default, the system assumes the current date to be the date of membership renewal. Should the customer have renewed his membership earlier, please adjust the date accordingly. You must then specify a receipt number and choose whether or not the subscription fee should be deducted from the customer's savings account. Clicking **Renew Membership** will renew the customer's subscription for one year and automatically set his status to active.

The screenshot shows the mangoO Customer interface. The top navigation bar includes 'Start', 'Customers', 'Loans', 'Accounting', 'Reports', and 'Settings'. Below this is a secondary menu with 'Search', 'Deposit', 'Withdrawal', 'Add Shares', 'New Loan', 'New Customer', 'Active Cust.', and 'Inactive Cust.'. The main content area is titled 'Jean Calvin (3/2006)'. It contains a form for customer details, including Name, Residence, Sickness, Gender, Phone No., Member since, DoB, E-Mail, Subscription paid until, Marital Status, Representative, Updated on / by, Occupation, and Relation. There are 'Update' and 'Renew' buttons. Below the form is a light blue box with a date field (31.07.2015), a 'Receipt No.' field, a checkbox for 'deduct from Savings', and a 'Renew Subscription' button. On the right side, there are three summary tables: 'Savings Account (Recent Transactions)', 'Loans Account', and 'Share Account'.

Date	Transaction Type	Amount	Receipt/Slip
01.01.2015	Deposit	4,000 UGX	R 0
Balance: 4,000 UGX			

No.	Status	Total Repay	Remaining	Rate Due
-----	--------	-------------	-----------	----------

Number of Shares	Value of Shares
2	40,000 UGX

### 2.4.3 Accounts' Details

The right-hand section provides you with a summary of the customer's accounts. For the sake of space, the **savings account table** will show the five most recent transactions only. You may access a complete list of all transactions on the savings account by clicking **Savings Account** in the table header. The shared column for Receipt / Slip numbers indicates the nature of a given number by a preceding *R* for receipts and a preceding *S* for withdrawal slips. (See 3.2 for further details on the savings account.)

The **loans account table** shows all past and recent loans. You can access the details of a particular loan by clicking on the loan number. (See 4 for further details on the loans account.)

Lastly, the **share account table** gives a summary on the currently owned number of shares and the combined value of these shares. Clicking on **Share Account** in the table header will take you to the share account with a complete list of all transactions. (See 3.1 for further details on the share account.)

### 2.4.4 Additional Options in the Menu Bar

When viewing customer details, the menu bar above provides you with a number of different options regarding that respective customer.

The screenshot shows a horizontal menu bar with the following options: Search, Deposit, Withdrawal, Add Shares, New Loan, New Customer, Active Cust., and Inactive Cust.

The options **Deposit** and **Withdrawal** will both take you to the customer's savings account where you may perform either operation (see 3.2).

The **Add Shares** option will take you to the customer's share account where you may add or transfer shares. (See chapter 3.1 for more information.)

The **New Loan** option allows you to create a new loan application for the customer (see 4.4).

## 3 Account Types

By default, mangoO keeps three different accounts for each customer: Share Account, Savings Account, and Loans Account.

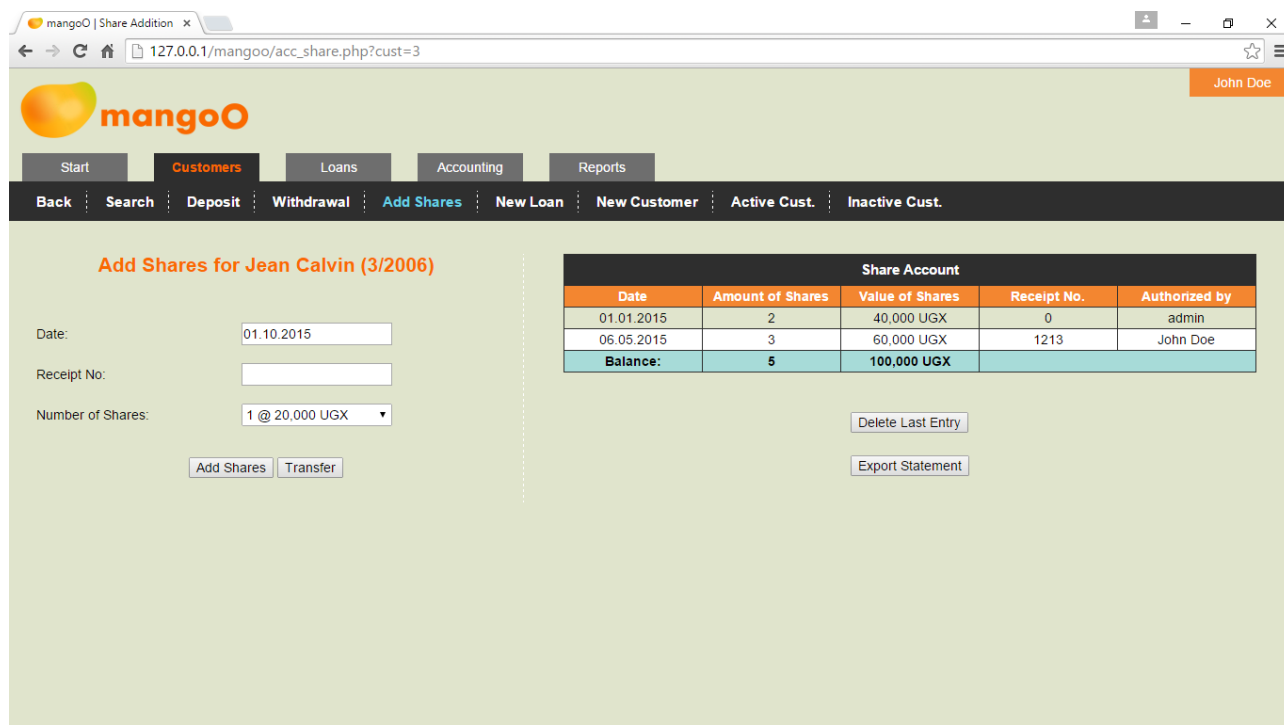
### 3.1 Share Account

You may access a customer's share account either by clicking **Share Account** in the table header on the customer's details page, or through the **Add Shares** option in the menu bar above the customer's basic information.

#### 3.1.1 Retrieving account information

The share account page is divided into two sections. The **right-hand** side will provide you with a comprehensive list of all transactions on the customer's share account. Clicking the Delete-icon allows the user to delete the latest transaction after entering a security captcha. This allows for instant error corrections on the side of the user.

Clicking **Export** will generate an XLS file containing the complete history of transactions on this account.



mangoO | Share Addition x

127.0.0.1/mangoO/acc\_share.php?cust=3

John Doe

Start Customers Loans Accounting Reports

Back Search Deposit Withdrawal Add Shares New Loan New Customer Active Cust. Inactive Cust.

**Add Shares for Jean Calvin (3/2006)**

Date: 01.10.2015

Receipt No:

Number of Shares: 1 @ 20,000 UGX

Add Shares Transfer

Share Account				
Date	Amount of Shares	Value of Shares	Receipt No.	Authorized by
01.01.2015	2	40,000 UGX	0	admin
06.05.2015	3	60,000 UGX	1213	John Doe
<b>Balance:</b>	<b>5</b>	<b>100,000 UGX</b>		

Delete Last Entry

Export Statement



### 3.1.2 Adding more shares to a customer's account

The form on the **left-hand** side allows you to add more shares to a customer's account. The system will assume the current date to be the date of share acquisition. In case the customer bought his additional shares at an earlier date, please adjust the date accordingly. Specifying a receipt number for the transaction is compulsory. The drop-down field *Number of Shares* allows you to choose the number of shares bought by the customer. The system will automatically calculate the amount due, based on the current price for one share. (This information can be edited by authorised users only. See 7 for more details.)

### 3.1.3 Transfer of shares

In case a customer wishes to terminate his membership with your financial institution, you may use **Transfer** to transfer shares from another customer **to the currently displayed account**. In order to do that, please choose from the drop-down field the customer who is ending his membership and click **Transfer Shares**. The currently displayed customer will then be credited with all the shares previously owned by the leaving customer. The share account of the leaving customer will be set to zero and his membership will be deactivated.

## 3.2 Savings Account

You may access a customer's savings account by either clicking *Savings Account* in the table header on the customer's details page, or through either the *Deposit* or the *Withdrawal* option in the menu bar above the customer's basic information.

### 3.2.1 Retrieving account information

The savings account page is divided into two sections. The **right-hand** side will provide you with a comprehensive list of all transactions on the customer's savings account. Clicking the Delete-icon allows the user to delete the latest transaction after entering a security captcha. This allows for instant error corrections on the side of the user.

Clicking **Export** will generate an XLS file containing the complete history of transactions on this savings account.

### 3.2.2 Deposits

Depending on the option you chose, the form on the **left-hand** side allows you to conduct deposits on the customer's savings account. The system will assume the current date to be the date of the transaction. In case the customer deposited at an earlier date, please adjust the date accordingly. Specifying a receipt number for the transaction is compulsory. The amount is to be entered in the bottom-most field.

### 3.2.3 Withdrawals

Depending on the option you chose, the form on the **left-hand** side allows you to conduct

withdrawals from the customer's savings account. The system will assume the current date to be the date of the transaction. In case the customer withdrew at an earlier date, please adjust the date accordingly. Specifying a withdrawal slip number as well as a receipt number for the transaction is compulsory. The bottom-most checkbox allows you to have the withdrawal fee deducted from the savings account. In this case, the charged fee will appear as a separate transaction on the account, showing the same date, receipt, and slip number as the original withdrawal itself.

Since the withdrawal fee is an income for the financial institution, mangoO will always insert the specified fee for all withdrawals into the incomes record in the accounting section. (The amount of the fee, however, can be edited by authorised users only. See 7 for more information.)

**Withdrawal for Jean Calvin (3/2006)**

Date:

Withdrawal Slip:

Amount:

Receipt No.:

Withdrawal Fee: ☐ deduct from Savings

Savings Account					
Date	Transaction Type	Amount	Receipt	W/draw Slip	Authorised by
01.01.2015	Deposit	4,000 UGX	0	0	admin
03.05.2015	Deposit	15,000 UGX	123	0	John Doe
22.06.2015	Deposit	80,000 UGX	456	0	John Doe
09.07.2015	Withdrawal	-40,000 UGX	789	100	John Doe
09.07.2015	Withdrawal Fee	-1,000 UGX	789	100	John Doe
02.10.2015	Deposit	64,000 UGX	1011	0	John Doe
		<b>Balance: 122,000 UGX</b>			

### 3.3 Loans Account

As the Loans Account is the most complex of all account types, the topic of loans is covered in a separate chapter. Therefore, kindly refer to chapter 4 for more information.

## 4 Loans

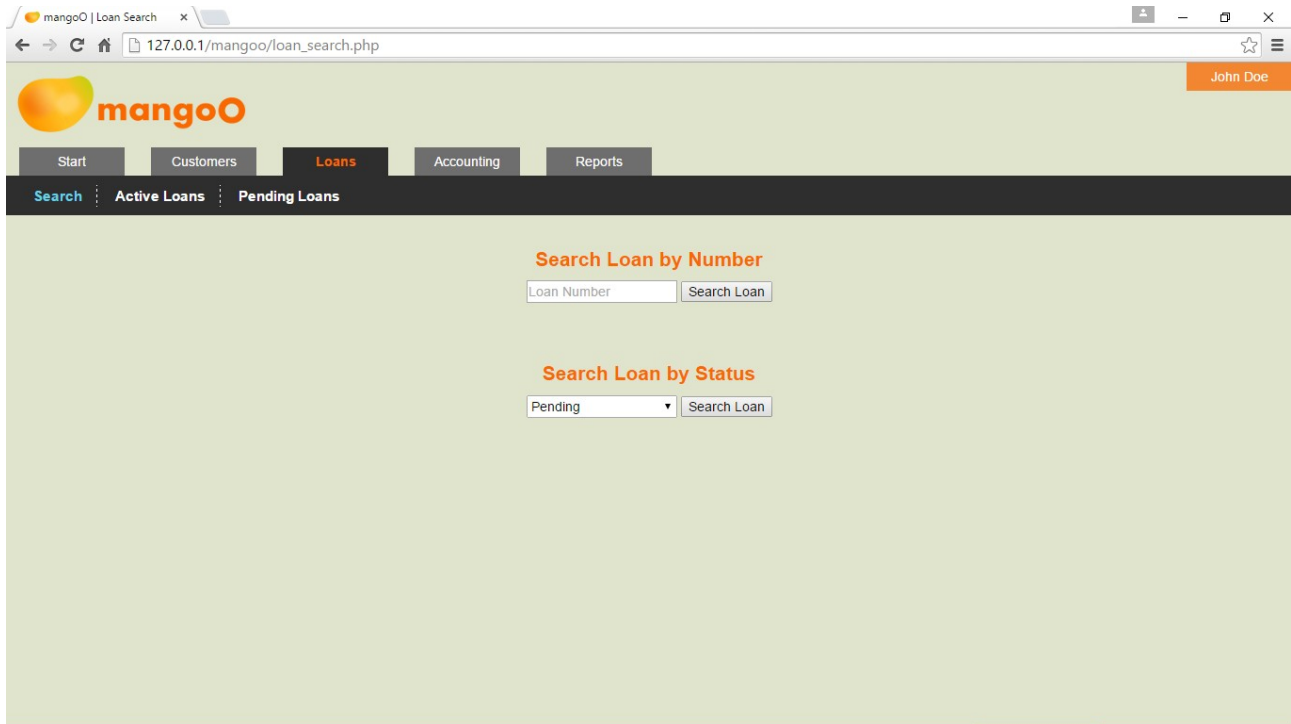
There are two ways of accessing a particular loan. One is to retrieve the details of the respective borrower. In the section displaying a customer's accounts, the loans table will show all past and recent loans. You can access the details of a particular loan by clicking on the loan number. (See also 2.4.3.)

Alternatively, you may search for a particular loan number straightaway. Selecting the *Loans* tabs

will take you to a search form for loans.

## 4.1 Loan Search

The upper input field is used to search for loans **by number**. Enter the loan number (or part of it) into the input field and click **Search**. The search result list will show all loans whose numbers match with the specified search term. You may access a particular record by clicking on the respective loan number. If a given number does not exist in the database, the search result list will be empty.

The screenshot shows a web browser window with the URL 127.0.0.1/mangoo/loan\_search.php. The page has a header with the mangoO logo and a user profile for John Doe. A navigation bar contains links for Start, Customers, Loans (highlighted), Accounting, and Reports. Below this is a sub-navigation bar with Search, Active Loans, and Pending Loans. The main content area has two search sections. The first section, 'Search Loan by Number', features a text input field labeled 'Loan Number' and a 'Search Loan' button. The second section, 'Search Loan by Status', features a dropdown menu with 'Pending' selected and a 'Search Loan' button.

The lower input field allows for **searches by status**. Select a particular status from the list and click **Search**. The mangoO system will provide you with a search result list including all loans that have the respective status. You may access a particular record by clicking on the respective loan number.

## 4.2 Predefined Lists for Loans

In addition, mangoO offers two predefined lists of loans by status.

### 4.2.1 List of Active Loans

The short link *Active Loans* will show a list of all loans whose status is currently set to *active*. You may access a particular record by clicking on the respective loan number.

Clicking **Export** will generate an XLS file which can then be altered, printed, sent, or otherwise used outside mangoO.

## 4.2.2 List of Pending Loans

The short link *Pending Loans* will show a list of all loans whose status is currently set to *pending*. You may access a particular record by clicking on the respective loan number.

Clicking **Export** will generate an XLS file which can then be altered, printed, sent, or otherwise used outside mangoO.

## 4.3 Loan Details Page

After accessing a particular loan, either through searching or through the account of the borrowing customer, mangoO will provide you with a comprehensive overview of all details concerning the respective loan.

### 4.3.1 Basic Loan Data

The left-hand section of the page presents all basic data about the loan. Apart from the status, none of this information can be changed manually.

In case a document or photograph was attached to one or both securities while entering the loan (see 4.4), those files can be accessed by clicking on the respective security.

The screenshot shows the mangoO web application interface. The browser address bar displays the URL `127.0.0.1/mangoo/loan.php?lid=185`. The user is logged in as John Doe. The navigation menu includes 'Start', 'Customers', 'Loans' (selected), 'Accounting', and 'Reports'. The sub-menu shows 'Back', 'Search', 'Active Loans', and 'Pending Loans' (selected).

**Loan No. L-49-1**

Customer: Lavenia Byler Purpose: test

Principal: 1,250,000 UGX Period: 13

Interest: 2.5% per Month Loan Fee: 12,500 UGX

Monthly Rate: 127,404 UGX Repay Total: 1,656,250 UGX

Secur. 1: Plot Secur. 2: Cow

Guarant.1: 56 Shanae Bello Guarant.2: 86 Val Cauley

Guarant.3: 96 Clotilde Fuqua Application Date: 19.08.2015

Issued on: DD.MM.YYYY Status: Pending

**Loan Payment Transactions**

Date due	Date paid	Princ. due	Princ. paid	Inter. due	Inter. paid	Receipt	Fined	Updated
Total:		0	0	0	0			
Remaining:		0		0				

Buttons: Delete Last Transaction, Export Statement, Update Status

After entering a new loan (see 4.4) into the system, mangoO will automatically have set the status of that loan to *Pending*. Such a loan is registered because it was applied for by one of the institution's customers. However, a pending loan has not yet been approved, let alone issued.

#### 4.3.1.1 Rejecting a Pending Loan

On pending loans, the only option is to update the status of that loan. In case a loan application has been **rejected**, the loan status must be set to *Refused* and **Update Status** must be clicked. Please note that even rejected loans will remain on the system for later reference.

#### 4.3.1.2 Approving a Pending Loan

In case a loan application has been **approved**, the loan status must be set to *Approved*. In addition, the date of issuing must be provided in the DD.MM.YYYY format. On clicking **Update Status**, the system will prompt you to specify the receipt number for the loan fee.

When a loan is approved, mangoO will generate a list of expected loan repayment transactions on the right-hand side of the page (see 4.3.2). Please note that due dates are calculated based on the date of issuing and that 31 days are allowed between payment dates.

### 4.3.2 Loan Payment Transactions Data

The right-hand section of the page presents data about loan payment transactions. While a loan is still pending, this section will be empty. On approval, the system will automatically have generated a list of expected loan repayment transactions (see 4.3.1.2). Please note that due dates are calculated based on the date of issuing and that 31 days are allowed between payment dates.

The screenshot displays the 'mangoO' web application interface. The top navigation bar includes 'Start', 'Customers', 'Loans', 'Accounting', and 'Reports'. Below this, a sub-navigation bar shows 'Back', 'Search', 'Active Loans', and 'Pending Loans'. The main content area is titled 'Loan No. L 100-2'. On the left, there is a form for loan details: Customer (Sherly Boudreau), Purpose (test), Principal (850,000 UGX), Period (6), Interest (2.5% per Month), Loan Fee (8,500 UGX), Monthly Rate (162,917 UGX), Repay Total (977,500 UGX), Secur. 1 (test), Secur. 2, Guarant. 1 (1 Martin Luther), Guarant. 2 (2 Jan Hus), Guarant. 3 (3 Jean Calvin), Application Date (19.08.2015), Issued on (19.08.2015), and Status (Approved). An 'Update Status' button is at the bottom of this form. On the right, a table titled 'Loan Payment Transactions' shows a list of transactions with columns: Date due, Date paid, Princ. due, Princ. paid, Inter. due, Inter. paid, Receipt, Fined, and Updated. The table includes a 'Total' row and a 'Remaining' row. Below the table, there is a 'Delete Last Transaction' button and a form for making a repayment with fields for Date Paid (21.10.2015), Amount Paid (UGX), Receipt No. (for Loan Repayment), and a checkbox for 'deduct from Savings'. A 'Make Repayment' button is at the bottom.

Date due	Date paid	Princ. due	Princ. paid	Inter. due	Inter. paid	Receipt	Fined	Updated
19.09.2015	20.09.2015	141,665	118,750	21,250	21,250	1234	<input type="checkbox"/>	John Doe
20.10.2015		141,667		21,250			<input type="checkbox"/>	admin
19.11.2015		141,667		21,250			<input type="checkbox"/>	admin
20.12.2015		141,667		21,250			<input type="checkbox"/>	admin
20.01.2016		141,667		21,250			<input type="checkbox"/>	admin
20.02.2016		141,667		21,250			<input type="checkbox"/>	admin
<b>Total:</b>		<b>850,000</b>	<b>118,750</b>	<b>127,500</b>	<b>21,250</b>			
<b>Remaining:</b>		731,250		106,250				

#### 4.3.2.1 Making a Repayment

In case of a repayment, please enter the **date** (by default the current date is assumed), the **receipt number**, and the **total amount paid** by the customer. Please also indicate whether the amount should be deducted from the customer's savings account.

The system will automatically divide the amount paid based on the idea, that the due interest for the month is always served first. This results in the following rules:

- In case the customers brings less than the due interest, the entire amount will be used to cover interest only.
- In case the customer brings more than the due interest but less than the total expected monthly rate (interest plus principal), interest will be cleared first and the remaining amount will be used on principal.
- In case the customers brings more than the total expected monthly rate, any excess money will be used to clear principal.
- In case a customer brings more than the total outstanding balance on both interest and principal, both positions will be cleared and excess money will be deposited on the customer's savings account.

Any payment of interest will reflect on the incomes side in the accounting section (see 5.2).

#### *4.3.2.2 Error Correction*

The mangoO system allows the user to always revert the last loan payment transaction. When clicking the Delete-icon, the system will prompt you to enter a 6-digit security captcha. This is purely a safety function to assure the willful execution of the delete command.

#### *4.3.2.3 Defaulted Payments and Default Fines*

In the Loan Payment Transactions list, due dates which lie in the past and have not been met, are indicated in red. In this case, the system will show a blue box below the payment section which allows you to charge a default fine. To do so, please enter the **date** (by default the current date is assumed), the **receipt number**, and the **total amount charged as fine**. You must also indicate whether the amount should be deducted from the **customer's savings account**. Kindly note that this is the **default setting**!

mangoO | Loan Details x

127.0.0.1/mangoO/loan.php?lid=154

Interest: 2.5% per Month Loan Fee: 10,000 UGX

Monthly Rate: 108,333 UGX Repay Total: 1,300,000 UGX

Secur. 1: Sales Agreement for Plot Secur. 2:

Guarant. 1: 29 Judi Spillman Guarant. 2: 13 Melania Mitchem

Guarant. 3: 33 Alec Kearl Application Date: 18.02.2015

Issued on: 11.02.2015 Status: Approved

Update Status

13.08.2015		83,333		25,000				admin
13.09.2015		83,333		25,000				admin
14.10.2015		83,333		25,000				admin
14.11.2015		83,333		25,000				admin
15.12.2015		83,333		25,000				admin
15.01.2016		83,333		25,000				admin
15.02.2016		83,333		25,000				admin
<b>Total:</b>		<b>833,330</b>	<b>0</b>	<b>250,000</b>	<b>0</b>			
<b>Remaining:</b>		<b>833,330</b>		<b>250,000</b>				

Delete Last Transaction

Date Paid: 21.10.2015 Amount Paid: UGX

Receipt No: for Loan Repayment ☐ deduct from Savings

Make Repayment

Date Paid: 21.10.2015 Amount fined: UGX

Receipt No: for Default Fine ☒ deduct from Savings

Charge Default Fine

Export Statement

Any payment of a default fine will reflect on the incomes side in the accounting section (see 5.2). Please be aware that mangoO will always assume a default fine to apply to **all outstanding transactions**. Therefore, all currently defaulted payments will be marked as **Fined**.

#### 4.3.2.4 Export Loan Statement

Clicking **Export** will generate an XLS file containing the complete history of transactions on this particular loan.

## 4.4 Entering a New Loan

In order to enter a new loan application, you first have to open the dataset of the customer (see 2.1) who wishes to apply for the loan. Provided the customer's membership status is **Active**, you will find an option in the upper menu bar called **New Loan**. Clicking it will allow you to fill a new loan application for that customer.

The screenshot shows a web browser window with the URL `127.0.0.1/mango/loan_new.php?cust=183`. The page header includes the mangoO logo and a user profile for John Doe. The navigation menu has tabs for Start, Customers, Loans, Accounting, and Reports. Below this is a secondary menu with links: Back, Search, Deposit, Withdrawal, Add Shares, New Loan (highlighted), New Customer, Active Cust., and Inactive Cust.

The main content area is titled "New Loan Application for Sharan Beacham (183)". It contains a form with the following fields:

Principal:	<input type="text" value="1200000"/>	Period:	<input type="text" value="6"/>
Interest Rate:	<input type="text" value="2.5"/>	Purpose:	<input type="text" value="Construction Work"/>
Security 1:	<input type="text" value="Cows"/>	Security 2:	<input type="text" value="Motorcycle"/>
Guarantor 1:	<input type="text" value="161 Gwendolyn Kimt"/>	Guarantor 2:	<input type="text" value="32 Milda Mcamis"/>
Guarantor 3:	<input type="text" value="123 Margeret Pajak"/>		
Monthly Rate:	<input type="text" value="230000"/>		
Repay Total:	<input type="text" value="1380000"/>	Loan Fee:	<input type="text" value="12000"/>
Date of Applic.:	<input type="text" value="23.10.2015"/>	Receipt No:	<input type="text" value="for Loan Appl. Fee"/>

A "Continue" button is located at the bottom center of the form.

In order to enter a new loan application in the system, fill all compulsory fields. As soon as the information on principal, loan period, and interest rate is entered, mangoO will calculate the monthly repayment rate, the total repay amount, and the applicable loan fee.

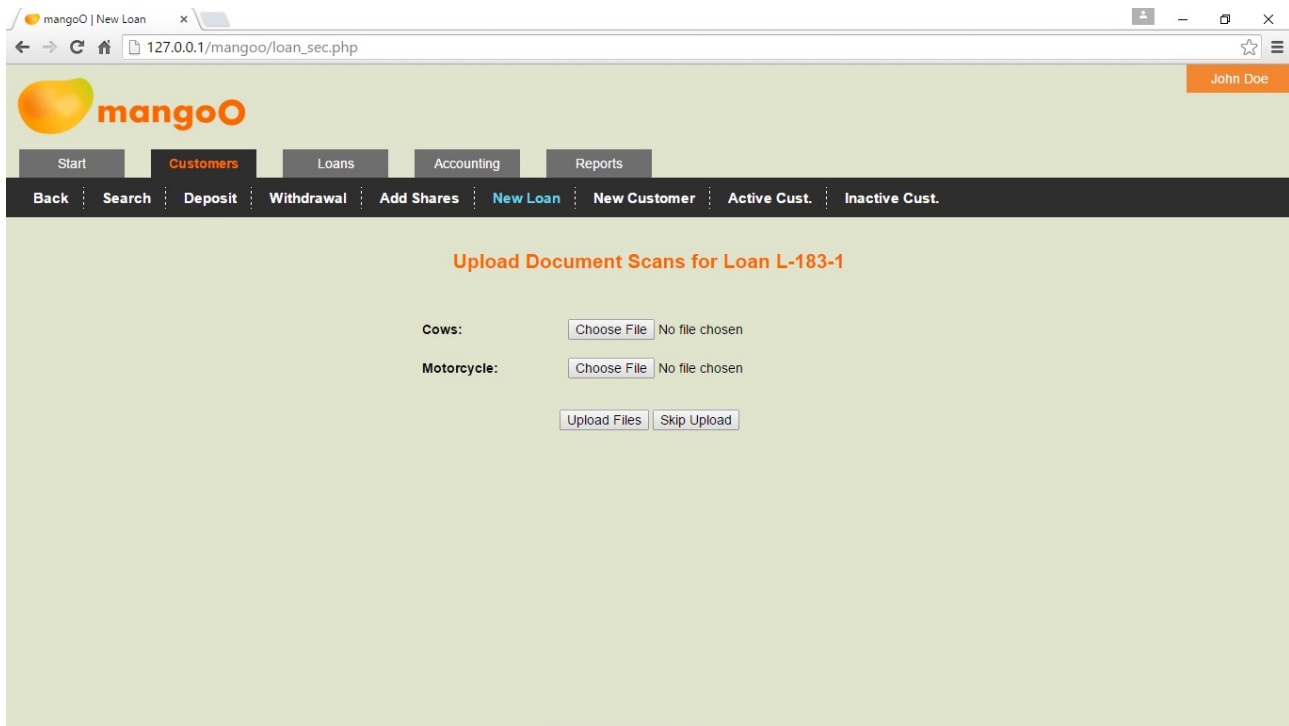
By definition, guarantors can only be active members of the institution and must be selected from the lists.

On completion, please click .

#### 4.4.1 Uploading Security Related Documents

The next page allows you to upload documents that further describe the specified securities. Depending on the number of securities, mangoO will offer you one or two option for uploading. You may want to attach photos, scans, or other documents related to the securities. Those documents will later be accessible through the loan's details page (see 4.3.1).





In order to attach any document to a security, click **Choose File**, navigate to the location of the file on your computer, and select it for upload. The system will only allow you to choose PDF, JPG, JPEG, PNG, TIF, TIFF, DOC, DOCX, XLS, XLSX, ODT, ODS and TXT files.

Clicking **Upload** will upload all selected files to mangoO.

Should you not wish to attach documents to any of the securities, click **Skip**.

## 5 Accounting

mangoO Microfinance Management can also be used for internal accounting purposes. Under **Accounting** you will find two options **New Expense** and **New Income**.

### 5.1 Expenses

Use this option to record all expenses of your micro-finance institution.

The screenshot shows the mangoO web application interface. At the top, there's a navigation bar with 'Start', 'Customers', 'Loans', 'Accounting' (highlighted), and 'Reports'. Below this is a sub-navigation bar with 'Back', 'New Expenditure' (highlighted), and 'New Income'. The main content area is titled 'New Expenditure' and contains a form with the following fields:

- Date: 26.10.2015
- Type: Airtime (dropdown menu)
- Amount: UGX
- Recipient: (empty text field)
- Voucher No.: (empty text field)
- Receipt No.: if any (empty text field)
- Details: (empty text field)

At the bottom of the form is a 'New Expenditure' button. To the right of the form is a table titled 'Expenditures for Current Month'.

Date	Type	Amount	Recipient	Details	Voucher
21.10.2015	Motorcycle	10,000/=	Petrol Station	Petrol for Motorcycle	123
26.10.2015	Airtime	5,000/=	MTN Uganda	Airtime for SACCO line	456

Below the table is a 'Delete Last Expenditure' button.

In order to record a new spending, enter all necessary information. Amount, recipient and payment voucher number are compulsory to include. Make sure to also choose an appropriate expenditure type from the list. (Expenditure types can be edited or amended by system administrators only.)

In order to enter the information into the system, click **New Entry**.

On the right-hand side, mangoO shows a list of all expenditures for the current month. Any further representation of accounting data is limited to the Reports section (see 6).

Clicking the Delete-icon lets the user delete the latest transaction after entering a security captcha. This allows for instant error corrections on the side of the user.

## 5.2 Incomes

**WARNING:** Under normal circumstances, this option is rarely ever needed! The mangoO system is designed to record all incomes automatically whenever they are generated from the institution's business. This means that payable fees, payments of interest, and other forms of income are captured automatically as they happen. However, instances might occur in which the manual recording of an income is inevitable. In this case, use this option to record such an income. Make sure this remains an exceptional incident!

In order to manually record a new income, enter all necessary information. Amount and receipt number are compulsory to include. Make sure to also choose an appropriate income type from the list. (Please note that income types can be edited or amended by system administrators only.)

In order to enter the information into the system, click **New Entry**.

On the right-hand side, mangoO shows a list of all incomes for the current month. Further representation of accounting data is limited to the Reports section (see 6).

Clicking the Delete-icon lets the user delete the latest transaction after entering a security captcha. This allows for instant error corrections on the side of the user. Please keep in mind that this will also delete the very transaction that generated this income on the respective customer's account!

## 6 Reports

Reporting is used to evaluate the institution's business activities. As this would typically be the work of management staff only, access to these reports is restricted to certain user accounts.

mangoO offers four different types of individual reports (Incomes Report, Expenditures Report, Loans Report, and Capital Report) plus two reports for summarizing either a month or a full year (Monthly and Annual Report). In order to generate a report, choose a type, select a timeperiod and the desired format in the light-blue menu bar, and click **Select Report**. By default, mangoO offers to generate a report for the previous month of the current year.

The screenshot shows the mangoO web interface. The top navigation bar includes 'Start', 'Customers', 'Loans', 'Accounting', 'Reports' (highlighted), and 'Settings'. Below this, a sub-menu shows 'Incomes Report', 'Expenditures Report', 'Loans Report' (highlighted), 'Capital Report', 'Monthly Report', and 'Annual Report'. The main content area displays a report for September 2015. It includes an 'Export Report' button and two tables:

Loan No.	Loan Status	Due Date	Due Amount
L 182-1	Approved	13.09.2015	108,333 UGX
L 100-2	Approved	19.09.2015	162,915 UGX
L 200-1	Approved	30.09.2015	133,200 UGX
<b>Total Due Payments: 404,448 UGX</b>			

Loan No.	Instalment Due	Recovered	Date
L 100-2	162,915 UGX	140,000 UGX	20.09.2015
L 200-1	133,200 UGX	15,000 UGX	29.09.2015
<b>Total Recoveries: 155,000 UGX</b>			
<b>Loan Recovery Rate: 38%</b>			

Loan No.	Customer	Principal	Interest	Period	Penalty Total	Date Out
----------	----------	-----------	----------	--------	---------------	----------

Clicking **Export** above the list will generate an XLS file which can then be altered, printed, sent, or otherwise used outside mangoO.

Further types of reports can be programmed by the system administrator or your supplier.

## 7 Settings

Please note that access to the system settings page is limited to users with the respective permission.

### 7.1 Basic Settings

The **Basic Settings** page shows several options concerning to system in general. Among those are the system-wide used currency abbreviation, the current value of shares, and others.

Also, the two sides user dashboard can be configured here.

If the auto-deactivation option for customer accounts is selected, all customer who have delayed the renewal of their annual subscription for more than 18 months will automatically be set to *inactive*.

### 7.2 Loan Settings

Under **Loan Settings** all settings regarding loans can be adjusted. This includes loan application fee, loan fee, the maximum and minimum loan principal, and others.

If the auto-fine option for defaulters is selected (see 1.1), loan default fines will automatically be charged and deducted from the defaulter's savings account after a dealy in payment of 30 days. Please note, however, that using this option will allow savings accounts to drop to a balance below zero.

### 7.3 Fees

This section allows to adjust all fees charged by your institution, such as entry fee, annual subscription fee, withdrawal fee, and others.

Setting the **Annual Subscription Fee** to zero will deactivate all checks related to this fee.

### 7.4 Users

On this page, existing users can be edited as well as new ones added to mangoO. In order to create a new mangoO user, fill the fields on the left-hand side of the page. Remember that each user must be assigned to a user group (see 7.5).

In order to edit an existing user, click the Edit-symbol next to the user's record in the right-hand section of the page. Whenever you edit an existing user, make sure to also re-type the password, even when you did not change it.

## 7.5 Usergroups

The permissions management of mangoO is based on user groups. On this page, existing usergroups can be edited as well as new ones added to mangoO. In order to create a new usergroup, fill the fields on the left-hand side of the page. Choose the appropriate permissions for each group by using the checkboxes.

In order to edit an existing usergroup, click the Edit-symbol next to the usergroup's record in the right-hand section of the page. Remember that when changing permissions for a usergroup, all users in this group will be assigned the new permission settings.

To delete a usergroup, click the Delete-symbol next to the usergroup's record. Please note a usergroup cannot be deleted while it still has members.

## 7.6 Log Records

The list of **Log Records** allows to monitor login and logoff activities of all mangoO users. In case a user forgot to log out from the system and his session was forcibly ended, the logoff time will show in red.