Welcome to TaxCalculator

Welcome!

Username: _____

Password: _____

Login

Create an Account

Create Account

Username: _____

Password: _____

Cancel   Create

Welcome Client

Input Income

Update Customized Tax Rules

Tax Calculated

Caculate tax   Exit

Input Income

Income already submitted

Income to be input

Cancel   Submit

Update Customized Tax rules

Tax rules in play

Each customized tax rule has a delete box attached, which, if ticked, wil delete corresponding rule when submitted

New customized rules to be submittted

Cancel   Submit

Welcome Administrator

Update Base Tax Rules

Display of CurrentBase Tax Rules

Display Statistics of Clients

Exit

Update Base Tax Rules

Current Base Tax Rules
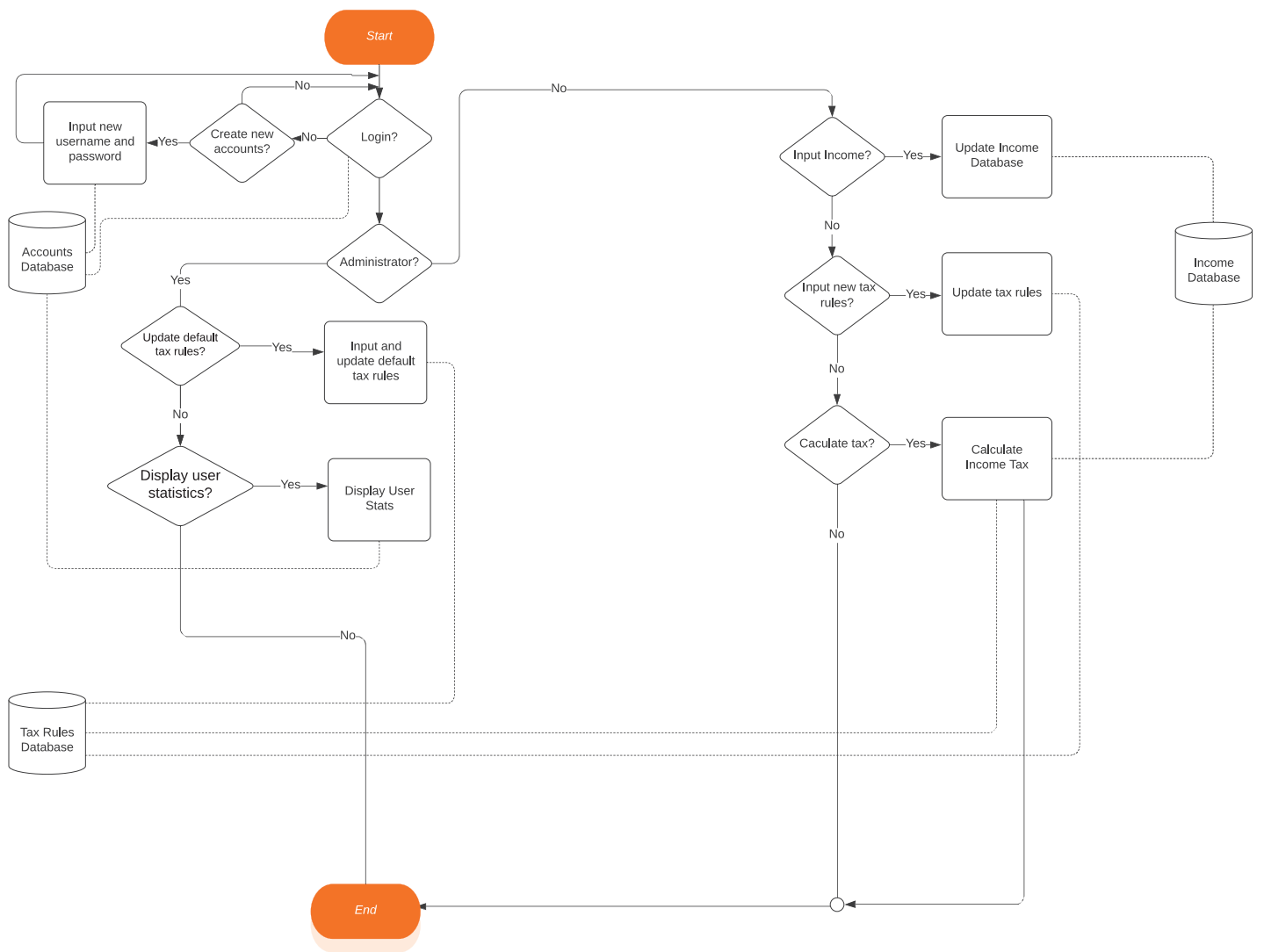
New rules to be submittted

Each base tax rule has a delete box attached, which, if ticked, wil delete corresponding rule when submitted

Update   Cancel

Display Statistics of Clients

Clients

Customized Rules

Exit

Start

Login?
- No → **Input Income?**
- (flow continues)

Create new accounts?
- Yes → **Input new username and password**
- No → (to Login)

Input new username and password → **Accounts Database**

Administrator?
- Yes → **Update default tax rules?**
- No → (to Input Income?)

Update default tax rules?
- Yes → **Input and update default tax rules**
- No → **Display user statistics?**

Display user statistics?
- Yes → **Display User Stats**
- No → **End**

Input Income?
- Yes → **Update Income Database**
- No → **Input new tax rules?**

Input new tax rules?
- Yes → **Update tax rules**
- No → **Calculate tax?**

Calculate tax?
- Yes → **Calculate Income Tax**
- No → **End**

Income Database

Tax Rules Database

End

Input Data

<table>
<tr><td colspan="2"><mark>Login and registration</mark></td></tr>
<tr>
<td>Data –Username and password</td>
<td>Comment

1. In the initial stage, accounts would be stored in a file in plain text.
2. At a later stage, security will be taken into account with encrypted files or another security scheme.</td>
</tr>
<tr>
<td>Example:

Administrator, 1234
Client 1, 5452</td>
<td>Location

Accounts database, may be just a file, instead of secured database, in the initial stage</td>
</tr>
<tr><td colspan="2"><mark>Administrator Stream</mark></td></tr>
<tr>
<td>Data 1-Add Default Tax Rules

Administrator updates the default tax rules applicable to all clients.</td>
<td>Comment

1. Default tax rules may be deleted, added, and edited.
2. Each tax rule has two basic parts: human-readable description (denoted by the quotation marks in the example) and machine-applicable rules (the code following the quotation marks).

Note: The syntax described above will be used for all examples.</td>
</tr>
<tr>
<td>Example:

"Progressive tax, increasing tax rates with increasing income"; >30,000, 0%; >60,000, 30%; >=60, 50%</td>
<td>Location

Tax rule database, may be just a file, instead of full-blown database, in the initial stage.</td>
</tr>
<tr>
<td>Data 2-Display and Edit Tax Rules

Administrator may edit both default and customized tax rules.</td>
<td>Comment
1. In the initial stage, the customized tax rules input by the clients must be interpreted by the Administrator manually into machine-applicable rules.
2. At a later stage, the translation may be done automatically.</td>
</tr>
<tr>
<td>Example</td>
<td>Location</td>
</tr>
</table>

"Senior benefit, $500 for seniors" customized by clients, will be transformed into "Senior benefit, $500 for seniors"; +$500.	Tax rule database, may be just a file, instead of a full-blown database, in the initial stage

Data 1-Input income Clients input personal income	Comment 1. Personal income would be split into three rough categories: salaries, business revenue, and capital gains. 2. Income may be negative to represent losses
Example: Salaries, 10,000; Business revenue, 10,000; Capital gains, 5,000	Location Income database, may be just a file, instead of a full-blown database, in the initial stage
Data 2-Customize Tax Rules Clients may customize tax rules applicable to themselves.	Comment In the initial stage, the customized tax rules input by the clients must be interpreted by the Administrator manually into machine-applicable rules.
Example "Senior benefit, $500 for seniors" customized by clients, will be transformed into "Senior benefit, $500 for seniors"; +$500.	Location Tax rule database, may be just a file, instead of a full-blown database, in the initial stage.

Output data:

Data 1-Display Tax Rules Administrator displays both the default tax rules applicable to all clients, and tax rules customized for each client.	Comment
Example: "Progressive tax, increasing tax rates with increasing income"; >30,000, 0%; >60,000, 30%; >=60, 50%	Location Retrieved from tax rule database and displayed on screen.
Data 2-Display statistics of clients	Comment

Administrator may display each client's files etc.	
Example Clients xxx, Salaries, 10,000; Business revenue, 10,000; Capital gains, 5,000; Senior benefit +$500	Location Retrieved from both income database and tax rule database, displayed on screen
Data 1-Income already inputted by the particular client	
Example: Salaries, 10,000; Business revenue, 10,000; Capital gains, 5,000	Location Retrieved from income database, displayed on screen
Data 2-Tax Rules in Play Display tax rules in play for a particular client.	Comment Both default and customized tax rules for the client, only human-readable part of rules will be displayed for users.
Example Default Tax rules: "Progressive tax, increasing tax rates with increasing income"; Customized tax rules: "Senior benefit, $500 for seniors"	Location Retrieved from income database, displayed on screen.
Data 3-Tax Calculated Display tax or rebate	
Example "You have a rebate of $500"	Location Calculated based on income database and tax rules database, displayed on screen.

Product Development Plan

Choice-Function	Comments

Home Screen
  1. Login
  2. Create an account
1 week
	Both Administrator and clients need to login, using his/her own account with his/her password.

Available Functions-Administrator Stream 1. Update Default tax rules 2. Interpret tax rules from human-readable form into machine-applicable form. 1 week	The separation of the two forms of tax rules shields clients from actual implementation of tax rules, giving a degree of freedom to change the implementation.
Available Functions-Client Stream 1. Display tax rules in play 2. Input income 3. Calculate tax 1 week	
Additional Functions 1. More complex tax rules	

Testing Plan

Action Test	Method of Testing - result
Run the program and check if it works.	Click on the program icon and wait for it to run.
Check if registration process works correctly when client uses the program for the first time.	Create login and password with Register button. Check if the login+password information will be written in the account database file.
Check if login function works correctly, differentiating into client and administrator streams.	Enter information in the login and password, and enter the program as a client and an administrator respectively.
Check Administrator stream 1. Display default tax rules 2. Display customized rules 3. Edit tax rules	1. Check the screen display against tax rule file 2. Check the screen display against tax rule file 3. After updating tax rules, check against tax rule files and display of tax rules
Check Client stream 1. Display tax rules in play	1. Check the screen display against tax rule file 2. Check the screen display against income file

2. Display income 3. Calculate tax	3. Manually apply tax rules to income, check against the calculated tax on display